MISSISSIPPI LAW JOURNAL

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VOLUME 60 SPRING 1990 NUMBER 1

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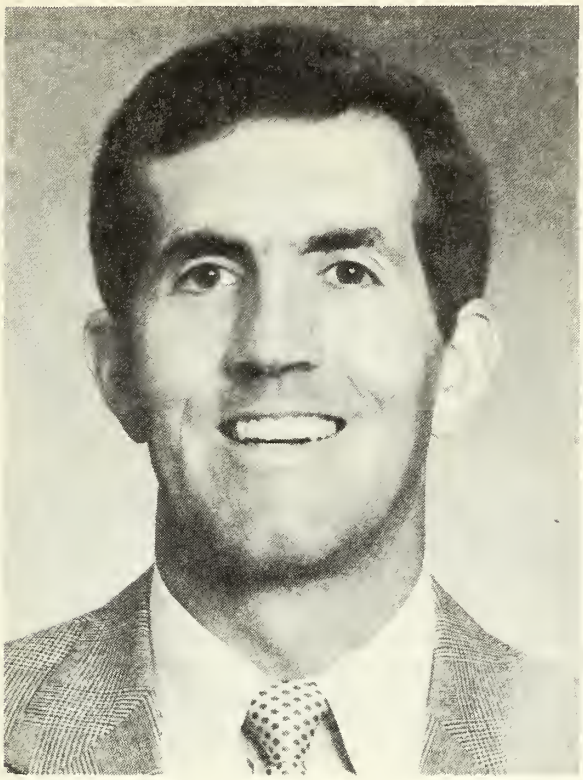
IN MEMORIAM

The University of Mississippi School of Law was recently saddened by the recent death of Reference and Administrative Librarian and Professor, Dr. Ellis E. Tucker, on November 6, 1990. Dr. Tucker was a member of the Law School faculty for the past twenty-two years.

The Editorial Board and staff of the *Mississippi Law Journal* will sorely miss Dr. Tucker and the support he provided for our endeavors. In recognition of Dr. Tucker's years of service to the Law School and the Law Journal in particular, we would like to dedicate Volume 60 in his memory.

The *Mississippi Law Journal* Welcomes Dean David E. Shipley



David E. Shipley of Columbia, S.C., has been selected as the new dean of the University of Mississippi School of Law after a national search. He assumed his new post on July 1, 1990. A noted lecturer and author, 40-year old Shipley was professor and associate dean for administration at the University of South Carolina School of Law.

In 1975 the Urbana, Illinois native received a juris doctor degree from the University of Chicago Law School, where he served as executive editor of the University of Chicago Law Review. While a student, he was also a research assistant for renowned professor Stanley Kaplan. He holds a bachelor of arts degree with highest honors in American history from Oberlin College in Oberlin, Ohio.

Mr. Shipley began his teaching career in 1977 as a visiting assistant professor at the University of South Carolina School of Law, attaining a full professor status there in 1985. In the interim, he served visiting professorships at the Ohio State University College of Law and the College of William and Mary at the Marshall-Wythe School of Law.

He has taught courses in intellectual property, civil procedure, administrative law, legal and equitable remedies, and domestic relations.

Mr. Shipley published "South Carolina Administrative Law," a treatise and practice manual, in 1983. The second edition was released last year.

A noted authority on copyright law, Shipley is presently co-authoring a copyright case book, which he expects to be published in 1991. He has addressed the subject of copyright in presentations at the American Bar Association's annual convention, meetings of the South Carolina Bar and various continuing legal education seminars and workshops.

The Board and members of the *Mississippi Law Journal* welcome David Shipley to the University of Mississippi and anticipate a bright future for the School of Law under his leadership.

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OVERVIEW OF MAJOR FEDERAL ENVIRONMENTAL ACTS AND REGULATIONS FOR THE GENERAL PRACTITIONER

John E. Milner and Charles A. Waggoner

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OVERVIEW OF MAJOR FEDERAL ENVIRONMENTAL ACTS AND REGULATIONS FOR THE GENERAL PRACTITIONER

John E. Milner and Charles A. Waggoner***

Introduction

Environmental conservation and protection is one of the leading focuses of public and political sentiment in the United States today. Two things come quickly to mind which demonstrate a renewed emphasis on environmental concerns: (1) increased public sentiment for environmental protection, highlighted by recent passage of the Clean Air Act[1] and, (2) from a legal perspective, an increased focus by the Environmental Protection Agency (EPA) and the United States Department of Justice (DOJ) on criminal prosecution of environmental law violations in the coming decade.[2] These factors, coupled with the sheer mass of environmental laws and regulations already established and the continuing amendments to these enactments, cause environmental considerations to be essential elements of the legal practice for activities as routine as property transfers

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* John E. Milner. B.A., University of Mississippi, with special distinction; J.D., University of Mississippi. Mr. Milner is a partner with Brunini, Grantham, Grower & Hewes of Jackson, Mississippi.

** Charles A. Waggoner, Ph.D., CHMM. B.S., Mississippi State University; Ph.D., Mississippi State University. Dr. Waggoner is the Hazardous Waste Officer and Assistant Professor of Chemistry at Mississippi State University.

[1] November 14, 1990.

[2] According to Richard B. Stewart, Assistant Attorney General for Land and Natural Resources, criminal prosecutions for environmental crimes will be a major focus of the Department of Justice in the '90s. *Current Developments*, Env't Rep. (BNA), at 14 (Feb. 2, 1990). As stated by Mr. Stewart, the perspective of the DOJ is that "[w]e're no longer happy just nudging violators toward compliance. We intend to send a message that we want compliance now with no more foot-dragging." *Id.* at 15. Stewart further stated that the DOJ is also committed to helping states assume a greater share of environmental enforcement. *Id.*

to such unique events as remedial action and cost recovery litigation for Superfund sites.

The primary environmental regulatory programs were established in a sequential rather than a comprehensive fashion.[3] This process produced initially a system of autonomous regulatory units. However, the last ten years have seen an emphasis on integration of environmental programs into a tapestry of interrelated standards.[4] Incorporation by reference of one standard into another has made it virtually impossible for those subject to environmental programs to comply with one set of regulations without having compliance requirements imposed in seemingly unrelated areas.

Because of this need for an integrated understanding of environmental law and the expanding future of environmental law in Mississippi and the United States at large, this presentation is intended to provide the attorney in general practice with an overview of what the authors consider to be the most frequently encountered and important environmental acts. This presentation is not intended to be comprehensive[5] and is predominantly

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[3] 1970 - Clean Air Act Amendments of 1970, Pub. L. No. 91-604 (December 31, 1970) (primary Clean Air Act regulatory program established); 1972 - Clean Water Act, Pub. L. No. 92-500 (October 18, 1972) (enacted as the Federal Water Pollution Control Act); 1974 - Safe Drinking Water Act, Pub. L. No. 93-523 (December 16, 1974); 1975 - Hazardous Materials Transportation Act, Pub. L. No. 93-633 (January 3, 1975); 1976 - Toxic Substances Control Act, Pub. L. No. 94-469 (October 11, 1976); and the Resource Conservation and Recovery Act, Pub. L. No. 94-580 (October 21, 1976). All of these acts have been amended several times since their enactment.

[4] For example, the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. §§ 9601-9675 (Supp. 1986), utilizes the strict liability standard of § 311 of the Clean Water Act as the standard of liability under CERCLA. CERCLA § 107, 42 U.S.C. § 9607 (Supp. 1986). Additionally, the Superfund Amendments and Reauthorization Act (SARA), Pub. L. No. 99-499 (October 17, 1986), amended CERCLA's clean-up standards provision to require consideration of "applicable" and "relevant and appropriate" federal and state standards (ARARs) in the determination of the clean-up standard at a CERCLA site. CERCLA § 121(d), 42 U.S.C. § 9621(d) (Supp. 1986).

[5] A number of federal and Mississippi acts will not be covered in this presentation. These include (1) Marine Protection Research and Sanctuaries Act (Ocean Dumping Act), 33 U.S.C. § 1401-1445 (1988); (2) National Environmental Policy Act (NEPA), 42 U.S.C. § 4321-4370 (Supp. V 1987); (3) Noise Control Act, 42 U.S.C. §§ 4901-4918 (1982); (4) Nuclear Waste Policy Act, 42 U.S.C. § 10101-10226 (1982); (5) Mississippi Radioactive Waste Transportation Act, MISS. CODE ANN. §§ 45-14-51 to 45-14-69 (Supp. 1989); and (6) Mississippi Marine Litter Act, MISS. CODE ANN. §§ 51-2-1 to -7 (Supp. 1990).

presented from a federal perspective. Attempts have also been made to present when and how these federal programs have been delegated to the state of Mississippi for implementation and enforcement, together with a brief review of Mississippi statutes and regulations that are relevant to the federal environmental programs. Additionally, although this presentation covers only environmental statutes and regulations, the authors recognize that agency policy statements, guidance documents, letters of interpretation, agency internal memoranda and, of course, case law, play a very important role in the practical implementation and scope of environmental programs.[6] It is beyond the scope of this presentation to discuss these components. However, it is hoped that this overview will give the general practitioner a firm grasp on the scope of the primary environmental laws that he may encounter in his practice and on the types of environmental issues that can affect his clients and, consequently, his practice.

RESOURCE CONSERVATION AND RECOVERY ACT

The first federal attempt at regulating the land disposal of the country's wastes was the Solid Waste Disposal Act,[7] passed by Congress in 1965. Significant amendments were made in 1970 and 1976 by the passage of the Resource Recovery Act[8] and Resource Conservation and Recovery Act (RCRA),[9] respectively. The latter was subsequently amended in both 1980[10] and 1984.[11] The 1984 amendments, commonly known as the Hazardous and Solid Waste Amendments (HSWA), significantly expanded the scope of RCRA.

RCRA, as amended, is divided into different subtitles, the

---

[6] For example, the EPA Region IV CERCLA Enforcement Policy Compendium currently contains 70 policy and guidance documents.

[7] Solid Waste Disposal Act, Pub. L. No. 89-272, 79 Stat. 997 (1965); *see also Solving the Hazardous Waste Problem*, U.S. EPA, EPA No. 530-SW-86-037 (Nov. 1986) at 3-4 (charting history of solid waste disposal laws).

[8] Resource Recovery Act, Pub. L. No. 91-512, 84 Stat. 1227 (1970).

[9] Resource Conservation and Recovery Act (RCRA), Pub. L. No. 94-580, 90 Stat. 2795 (1976) (codified at 42 U.S.C. § 6901 (1982)).

[10] Pub. L. No. 96-482, 94 Stat. 2334 (1980).

[11] Pub. L. No. 98-616, 98 Stat. 3221 (1984).

most important of which are Subtitles C, D and I, since they establish the core of the EPA's regulatory program for waste management and groundwater protection:[12]

1. Subtitle C establishes a "cradle to grave" system for managing hazardous waste from generation through disposal.[13]

2. Subtitle D establishes a system for managing primarily non-hazardous solid waste.[14]

3. Subtitle I regulates underground storage tanks used to store petroleum and hazardous substances.[15]

I. Subtitle C—Hazardous Waste Regulation

A. Statutory and Regulatory Definitions

Under RCRA, "hazardous waste" is a subset of "solid waste," which has been defined by EPA regulations to include any "discarded material" for which no specific exemption applies,[16] regardless of whether it is solid, contained liquid, semi-solid or gaseous in nature.[17] Discarded material is defined as any material that is abandoned, recycled or "inherently waste-like."[18] A material is abandoned if it is disposed of, burned or incinerated or accumulated, stored or treated (but not recycled) prior to, or in lieu of, abandonment.[19] Material that is recycled is a solid waste if it is used in a manner constituting disposal, burned for energy recovery, reclaimed, or accumulated specula-

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[12] In response to the problem of hypodermic needles and other medical waste washing up on coastal shores, Congress enacted the Medical Waste Tracking Act of 1988, Pub. L. No. 105-82, 101 Stat. 2950, as Subtitle J of RCRA. 42 U.S.C. § 6992a-6992k (Supp. 1986).

[13] RCRA §§ 3001-3020, 42 U.S.C. §§ 6921-6939b (1982 & Supp. 1990); *see* 40 C.F.R. §§ 260-272 (1989) (EPA regulations outlining "cradle to grave" system).

[14] RCRA §§ 4001-4010, 42 U.S.C. §§ 6941-6944a (1982 & Supp. 1990); *see* 40 C.F.R. §§ 255-257 (1989) (regulations dealing with non-hazardous waste disposal).

[15] RCRA §§ 9001-9010, 42 U.S.C. §§ 6991-6991i (1982 & Supp. 1990); *see* 40 C.F.R. §§ 280-281 (1989) (regulations governing operation and maintenance of underground storage tanks).

[16] 40 C.F.R. § 261.2(a) (1989). The limited number of regulatory exemptions are listed in 40 C.F.R. § 261.4(a) (1989).

[17] RCRA § 1004(27), 42 U.S.C. § 6903(27) (1982). The statutory definition contains certain specific exclusions. *Id.*; *see also* 40 C.F.R. § 261.4(a) (1989) (enumerating regulatory exclusions).

[18] 40 C.F.R. § 261.2(a) (1989).

[19] *Id.* § 261.2(b).

tively.[20] Inherently waste-like materials include certain recycled listed hazardous wastes and any other discarded materials the EPA adds according to criteria intended to identify substantial hazards to human health and the environment when recycled.[21]

The next step is to determine whether the solid waste is a "hazardous waste." If it does not qualify for an exemption,[22] a solid waste will be classified as a hazardous waste if (1) it is specifically listed by EPA as such in 40 C.F.R. § 261, Subpart D (1989); or (2) it exhibits any one of the four hazardous characteristics set forth in 40 C.F.R. § 261, Subpart C (1989);[23] or (3) it is a mixture of a solid waste with a listed hazardous waste or with a characteristic waste if the entire mixture exhibits a hazardous characteristic, with certain exceptions.[24]

B. Listed Hazardous Wastes

The EPA has published three tables of hazardous wastes, containing four lists of such wastes. The EPA has assigned a unique identification number to each waste set forth in these lists for identification and reporting purposes. These lists are described as follows:

(1) Non-specified Source Table. This table contains a list that identifies wastes from common manufacturing and industrial processes, such as spent solvents. Each such waste carries an "F" number.[25]

(2) Specific Source Wastes. This table contains a list that

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[20] *Id.* § 161.2(b).

[21] *Id.* § 161.2(d).

[22] *See* 40 C.F.R. § 261.4(b) (1989) (listing exemptions from "hazardous waste" definition).

[23] RCRA defines hazardous waste as a solid waste "which . . . may (A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitating reversible illness or (B) pose a substantial present or potential hazard to human health or the environment when properly treated, stored, transported or disposed of, or otherwise managed." RCRA § 1004(5), 42 U.S.C. § 6903(5) (1982). EPA regulations substantially restrict the statutory definition. 40 C.F.R. § 261.3 (1989); *see* RCRA § 3001(b), 42 U.S.C. § 6921(a)(1) (1982) (monitoring regulations for "identifying the characteristics of hazardous waste, and listing particular hazardous waste . . . .").

[24] 40 C.F.R. § 261.3(a) (1989).

[25] *Id.* § 261.31. For example, F001 specifies certain "spent halogenated solvents used in degreasing. . . ." *Id.*

identifies sludges, wastewater and other process wastes from specific industries such as wood preserving and smelting. These wastes are assigned a "K" number.[26]

(3) Discarded Commercial Chemical Products Table.[27] This table consists of two lists. One list, carrying "P" numbers, contains hazardous wastes deemed to be acutely hazardous when discarded and therefore subject to more stringent and extensive regulations.[28] The second list, carrying a "U" number, sets forth chemicals determined to be toxic.[29]

All "listed" wastes are defined as hazardous regardless of their concentrations and must be handled according to the EPA's Subtitle C hazardous waste regulations.[30] However, if a company can demonstrate that its waste at a specific facility is not hazardous, the waste may be "delisted" and then is no longer subject to Subtitle C regulations at that facility.[31] A delisted waste is still covered by Subtitle D solid waste management provisions.

C. Characteristic Hazardous Waste

A solid waste is hazardous, even if it is not a listed waste, if tests reveal that it exhibits one or more of the following four characteristics: (1) ignitability, (2) corrosivity, (3) reactivity, or (4) toxicity.[32] Ignitability is intended to identify waste capable of causing a fire under routine handling conditions.[33] The corrosivity factor identifies waste capable of corroding metal and thereby causing containers to leak.[34] Reactivity identifies unsta-

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[26] 40 C.F.R. § 261.32. For example, K001 identifies bottom settlement sludge from the treatment of waste waters from certain wood processing. *Id.*

[27] *Id.* § 261.33.

[28] For example, P064 is methyl isocyanate, the toxic gas released from the Union Carbide facility in Bhopal, India. *Id.* § 261.33(e) (1989).

[29] For example, U211 is carbon tetrachloride, used in cleaning solvents. *Id.* § 261.33(f); *see Id.* § 261.5(e) (promulgating more stringent requirements for acutely hazardous wastes).

[30] Anything that comes into contact with a listed hazardous waste also becomes a listed waste.

[31] *Id.* § 260.22; *see also* RCRA § 3001(f), 42 U.S.C. § 6921(f) (Supp. 1990).

[32] 40 C.F.R. §§ 261.3, 261.20 (1989).

[33] *Id.* § 261.21.

[34] *Id.* § 261.22.

ble waste that is likely to create explosions and/or toxic fumes during handling, including mixture with water.[35] Toxicity is designed to identify waste that is likely to "leach" hazardous concentrations of toxic metals and hazardous organic compounds into ground water when disposed of in or on the land. Such a determination is made through a laboratory process called the Toxicity Characteristic Leaching Procedure (TCLP).[36] It should be noted that there is a category of "special wastes" which are subject to management practices somewhat outside the normal scheme which has been established for hazardous waste.[37]

D. Cradle to Grave Regulatory Program

The EPA has designed the RCRA regulations for "cradle to grave" management of hazardous waste by establishing a recording system to track the waste from its site of generation to the point of final disposal. This comprehensive system has four primary components:

(1) A manifest system requiring that uniform identification documents accompany any transported hazardous waste from the point of generation to the point of final disposal;[38]

(2) A permitting system for controlling the operation of all facilities involved in the treatment, storage, and disposal of haz-

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[35] *Id.* § 261.23.

[36] 55 Fed. Reg. 11798 (1990). The TCLP Rule announced by the EPA on March 6, 1990 sets new criteria for determining whether a waste contains hazardous constituents and replaces the Extraction Procedure (EP) Toxicity Test found at 40 C.F.R. § 261.24 (1989). It adds 25 organic chemicals to the eight metals and six pesticides on the existing list of constituents regulated under RCRA. 55 Fed. Reg. 11798 (1990). Compliance with the new rule is expected to (1) increase the quantity of hazardous waste regulated by RCRA by approximately 1.8 million metric tons and (2) cost industry between $250 million and $400 million a year to comply with the rule, with the lionshare to be paid by the petroleum refining, pulp and paper, synthetic process, wholesale petroleum marketing and organic chemicals industries. *Current Developments*, Env't Rep. (BNA), at 1837 (Mar. 9, 1990).

[37] The catgory of special waste deals primarily with materials which potentially meet the definition of hazardous waste and for which there are accepted methods for recyling. This category includes wastes such as used oil, old dead acid batteries, metals with economic value such as silver, osmium and flammable liquids used as a fuel onsite. *See* 40 C.F.R. § 266 (1989).

[38] *Id.* §§ 262.20-.23 (1989).

ardous waste;[39]

(3) A land ban disposal program controlling the disposal of hazardous waste on or into the land;[40] and

(4) A corrective action program that requires clean-up of releases of hazardous waste or hazardous constituents.[41]

1. The Manifest System

a. Generators

The first element of the manifest system is the generator, the person who actually produces the waste or first causes the waste to become subject to the RCRA regulations.[42] All RCRA generator requirements apply to persons who generate over 1000 kilograms (2200 pounds) per month of non-acutely hazardous waste per month.[43] These "large quantity generators" may store hazardous wastes on-site for up to ninety days without having to obtain a permit as a storage facility.[44]

In contrast to these "large quantity generators," most, but not all, of the key requirements of the RCRA program must be met by "small quantity generators" producing between 100 kilograms and 1000 kilograms (220 to 2200 pounds) of non-acutely hazardous waste per month and less than one kilogram of acutely hazardous waste per month.[45] Small quantity generators may store onsite without a permit the hazardous waste they generate for (i) up to 180 days or (2) up to 270 days if the hazardous waste must be transported more than 200 miles for off-site treatment, storage, or disposal, without obtaining a permit. Furthermore, the total quantity of hazardous waste store on site may

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[39] *Id.* §§ 264-265.

[40] *Id.* § 268.

[41] *Id.* §§ 264.100-.101.

[42] *Id.* § 260.10(a).

[43] *Id.* § 261.5. "Acutely Hazardous Waste" is defined as discarded commercial chemical waste that is P-coded. *Id.* § 261.33(e); *see supra* note 28 and accompanying text (citing to definition of P-coded substances).

[44] 40 C.F.R. § 262.34(g) (1989). Additionally, the generator can accumulate up to 55 gallons of hazardous waste or up to one quart of acutely hazardous waste at "satellite accumulation areas" for any amount of time without triggering the 90-day storage provision, provided certain safeguards are taken. 40 C.F.R. § 262.34(c) (1989).

[45] *Id.* § 261.5, 262.20-.22; *see* RCRA § 3001(d), 42 U.S.C. § 6921(d) (1989) (requiring EPA to promulgate small quantity generator regulations).

not exceed 6000 kilgrams (13,200 pounds).[46] Small quantity generators generating less than 100 kilograms (220 pounds) of non-acutely hazardous waste per month and less than one kilogram of acutely hazard waste per month, are "conditionally exempt," but must meet certain minimum requirements.[47]

Generators first must determine if their waste is hazardous.[48] Once a generator determines a waste is hazardous, the generator must notify the regulatory agency by obtaining an EPA identification number for each site at which hazardous waste is generated.[49] If the generator chooses to dispose of the hazardous waste off-site by sending it to a commercial or publicly owned treatment, storage, or disposal facility (TSDF), the generator must package, label, and manifest the waste properly for transportation on placarded vehicles.[50] The EPA has adopted the Department of Transportation regulations promulgated under the Hazardous Materials Transportation Act,[51] covering the packaging, labeling, marketing and placarding of hazardous waste being shipped for disposal.[52] Furthermore, the EPA regulations require that any containers with volumes of 110 gallons or less be marked with the generator's name, address, and manifest document number and a specific warning that "[f]ederal law prohibits improper disposal."[53]

b. The Manifest

In order to monitor the off-site transportation of hazardous waste, the EPA requires generators to prepare a uniform hazardous waste manifest.[54] This form, with carbon copies for participants in a shipment, identifies the type and quantity of waste, the generator, the transporters, and the facility to which the

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[46] 40 C.F.R. § 262.34(d)-(e) (1989).
[47] *Id.* § 261.5.
[48] *Id.* § 262.11.
[49] *Id.* § 262.12.
[50] *Id.* §§ 262.30-.33.
[51] 49 U.S.C. §§ 1801-12 (1982).
[52] 40 C.F.R. §§ 262.30-.33 (1989).
[53] *Id.* § 262.32.
[54] *Id.* §§ 262.20-.23. These provisions do not apply to small quantity generators under certain circumstances. *Id.* § 262.20(e).

waste is being shipped.[55] It must accompany the waste wherever it travels; each individual handler of the waste must sign the manifest and keep one copy.[56] Within thirty days after the hazardous waste reaches its destination, the owner of that facility returns a copy of the manifest to the generator to confirm that the waste arrived.[57] Additionally, generators other than conditionally exempt small quantity generators (less than 220 pounds of hazardous waste generated per month) are subject to "exception reporting" requirements if the generator does not receive a signed copy of the manifest from the owner or operator of the TSDF within certain time periods after the date of shipment.[58]

Generators must retain copies of the manifest for three years after shipment.[59] Generators who ship hazardous waste off-site must also provide a biennial report to their authorized state agency or to the EPA regarding their shipping activities and waste minimization efforts.[60]

c. Transporters

Transporters pick up properly packaged and labeled hazardous waste from generators and transport it off-site by air, rail, highway, or water to the treatment, storage, and disposal facilities (TSDF).[61] Transporters must carry copies of the completed manifest and must put proper symbols on the transport vehicle to identify the type of waste being transported.[62] Like generators, transporters must obtain an EPA identification number.[63] EPA regulations also require transporters to comply with procedures for hazardous waste spill cleanup because of the potential for transportation accidents.[64]

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[55] RCRA § 1004(12), 42 U.S.C. § 6903(12) (1982); *see also* 40 C.F.R. § 260.10(a) (1989) (defining "manifest"); 40 C.F.R. § 262 app. (manifest form and instructions).

[56] 40 C.F.R.§ § 262.22-.23 (1989).

[57] *Id.* § 264.71(b)(4).

[58] *Id.* § 262.14.

[59] *Id.* § 262.40.

[60] *Id.* § 261.41.

[61] *Id.* § 260.10(a).

[62] *Id.* § 263.20.

[63] *Id.* § 263.11.

[64] *Id.* §§ 263.30-.31; *see* 49 C.F.R. §§ 171.15-16 (DOT hazardous waste discharge notice requirements adopted in 40 C.F.R. § 261.30) (1989).

2. The Permitting Program

The treatment, storage, and disposal facilities (TSDFs) that receive hazardous waste from the transporter are subject to an extensive EPA permitting program.[65] Treating facilities[66] use various processes to alter the character or composition of a hazardous waste in order to (1) neutralize the waste, (2) recover energy, or (3) render the waste non-hazardous or less hazardous. Storage facilities hold hazardous waste temporarily until it is treated, disposed of, or stored elsewhere.[67] A disposal facility is a location where hazardous waste is intentionally placed and at which the waste will remain after the facility is closed.[68]

A minority of TSDFs are still operating under "interim status," which enables facilities to continue to operate until their permit applications are approved or denied if they (1) were in existence on the effective date of the RCRA statutory or regulatory amendments that rendered the facilities subject to having a RCRA permit, November 19, 1980, and (2) meet certain technical requirements and standards for waste management.[69] Congress established interim status in recognition of the fact that it would take time for the EPA and the states to have a final permitting process in place. In order to continue to operate, most TSDFs must receive final permits before November 8, 1992, or undergo closure.[70]

Under the RCRA framework, TSDFs must have a permit in order to operate unless a permit exemption applies. The permit system requires facilities to meet detailed operating require-

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[65] 40 C.F.R. §§ 264-65 (1989).

[66] EPA regulations define a "facility" as "all contiguous land, and structures, other appurtenances, and improvements on the land, used for treating, storing, or disposing of hazardous waste." *Id.* § 260.10.

[67] *Id.*

[68] *Id.*

[69] *Id.* § 270.70-.73. Interim status TSDF regulations are promulgated in 40 C.F.R. § 265 and final TSDF regulations are promulgated in 40 C.F.R. § 264. These final TSDF regulations do not apply to TSDF's in a state with a "delegated" RCRA hazardous waste program authorized and approved by EPA. *Id.* § 271.

[70] *Id.* § 270.73(g). Interim status incinerators must have been issued final permits before November, 1989, or have undergone closure. *Id.* § 270.73(f). Interim status land disposal facilities must have received final permits by November 8, 1988, or have undergone closure. *Id.* § 270.73(g).

ments, including "minimum technology requirements" for each type of treatment, storage, and disposal unit.[71] Examples include installing double liners and leachate detection and collection systems for landfills.[72] Permit holders are also required to meet certain standards for waste analysis,[73] security,[74] inspection,[75] training,[76] facility location,[77] emergency procedures,[78] record-keeping and reporting,[79] groundwater monitoring,[80] and corrective action at all solid waste management units of a facility for releases of hazardous wastes and hazardous constituents.[81]

RCRA regulations require TSDF owners to prepare for the time when their facilities will close. Owners must:

(1) Prepare and implement a closure plan that meets closure performance standards;[82]

(2) Prepare and implement a post-closure plan that provides for care of the facility for at least thirty years after closure, including groundwater monitoring, security and waste maintenance requirements;[83] and

(3) Acquire sufficient financial assurance (such as insurance, state trust funds, surety bonds, and letters of credit) to pay for closure, post-closure and third party liability.[84]

3. Land Disposal Ban

The 1984 HSWA amendments to RCRA required the EPA to examine all hazardous wastes to determine if any should be banned from land disposal.[85] The amendments prohibited the

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[71] *Id.* §§ 264.170-.603; 265.170-.603.
[72] *Id.* §§ 264.220-.231, 264.300-.3170-.230, 265.300-.316.
[73] *Id.* §§ 264.13-265.13.
[74] *Id.* §§ 264.14-265.14.
[75] *Id.* §§ 264.15-265.15.
[76] *Id.* §§ 264.16-265.16.
[77] *Id.* §§ 264.18-265.18.
[78] *Id.* §§ 264.50-.56, 265.50-.56.
[79] *Id.* §§ 264.71-.76, 265.71-.76.
[80] *Id.* §§ 264.90-.94, 265.90-.94.
[81] *Id.* § 264.101.
[82] *Id.* §§ 264.110-.166, 265.110-.116.
[83] *Id.* §§ 264.117-.120, 265.117-.120.
[84] *Id.* §§ 264.140-.151, 265.140-.151.
[85] RCRA § 3004(d)-(m), 42 U.S.C. § 6924(d)-(m) (Supp. 1990).

land disposal of untreated hazardous waste unless the EPA found that there would be "no migration of hazardous constituents . . . for as long as the wastes remain hazardous."[86] Waste that is determined not to pose a threat to health and the environment may continue to be disposed of on land.[87]

If a waste is banned from land disposal, it must be treated and rendered substantially less hazardous before it can be disposed of on land.[88] The EPA has established and is continuing to establish treatment standards for banned wastes.[89] These standards, required by RCRA, specify a level or method of treatment which substantially reduces the toxicity or mobility of the hazardous constituents so as to minimize long-term threats to human health and the environment.[90] The EPA is basing treatment standards on the "best demonstrated available technology (BDAT)."[91]

The 1984 HSWA amendments set strict deadlines for determining whether wastes should be banned from land disposal and for developing treatment standards in a phased program.[92] The EPA first banned dioxins and certain solvents, unless the wastes were pretreated, effective November 8, 1986.[93] As of July 8, 1987, the EPA banned the disposal of "California list" wastes, which include liquid hazardous wastes containing certain metals, cyanides, PCB's, halogenated organic compounds, or acidic wastes.[94] The EPA has published a ranking of all other hazardous waste with a land ban schedule applied to a third of these wastes at a time.[95] On August 8, 1988, the EPA restricted land disposal of hazardous waste in the first one-third of the highest

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[86] *Id.* § 3004(d)(1), 42 U.S.C. § 6924(d)(1).

[87] *Id.*

[88] *Id.* § 3004(M), 42 U.S.C. § 6924(m) (Supp. 1990).

[89] 40 C.F.R. §§ 268.40-.44 (1989).

[90] RCRA § 3004(m)(1), 42 U.S.C. § 6924(m)(1) (Supp. 1990).

[91] 40 C.F.R. § 268.41-.43 (app. II) (1989). EPA has promulgated treatment standards for certain banned wastes expressed as concentrations in waste extract, specified technologies and waste concentrations. *Id.* The procedure used by the EPA to determine if a particular technology is in fact the best (BDAT) is known as the toxicity characteristic leachable procedure. *Id.* § 268 (app. I).

[92] RCRA § 3004(d)-(g), 42 U.S.C. § 6924(d)-(g) (Supp. 1990).

[93] RCRA § 3004(e), 42 U.S.C. § 6924(e) (Supp. 1990), 40 C.F.R. § 280.30-.31 (1989).

[94] 40 C.F.R. § 268.32 (1989).

[95] *Id.* § 268.10-.12.

ranking hazardous wastes.[96] On June 8, 1989, the EPA banned wastes from the second third.[97] Effective as of May 8, 1990, the EPA applied the ban to hazardous wastes within the last one-third of its ranking list.[98]

Some hazardous wastes may continue to be disposed of on or in the land for up to two years past the assessment deadline if the EPA determines that sufficient or adequate treatment technology is not available to make the waste safe for land disposal. This is essentially a grace period that provides limited extra time for industry to develop acceptable treatment technology or capacity.[99] However, if sufficient treatment is still unavailable after two years, those wastes are banned from land disposal unless, on a case-by-case basis, the EPA has granted a variance during the construction of new treatment capacity.[100] The EPA may grant up to two one-year extensions of the ban's effective date if contractual commitments for construction of treatment capacity exist and there is no suitable alternative capacity.[101]

4. Corrective Action Requirements

To control releases of hazardous waste, the EPA regulations for TSDFs require (1) a detection monitoring program[102] to monitor ground water wells for hazardous constituents, (2) a compliance monitoring program[103] to track migration of hazardous constituents and determine if ground water standards are violated and (3) a corrective action program[104] to remove or treat hazardous constituents if ground water protection standards are violated. The applicable ground water protection standard will be specified in the TSDF permit.[105] According to the regulations, corrective action on a site where the ground water standard is

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[96] *Id.* § 268.33.

[97] *Id.* § 268.34.

[98] 55 Fed. Reg. 22520 (1990); *see also* 40 C.F.R. § 268.12 (1989).

[99] RCRA § 3004(h)(2), 42 U.S.C. § 6924(h)(2) (Supp. 1990).

[100] RCRA § 3004(h)(3), 42 U.S.C. § 6924(h)(3) (Supp. 1990); *see* 40 C.F.R. § 268.50(a) (1989) (procedures for variance when treatment unavailable).

[101] RCRA § 3004(h)(3), 42 U.S.C. § 6924(h)(3) (Supp. 1990).

[102] 40 C.F.R. § 264.98 (1989).

[103] *Id.* § 264.99.

[104] *Id.* § 264.100.

[105] *Id.* § 264.100(a), (b).

violated must begin within a reasonable time after the violation.[106] Accompanying the corrective action is the institution of a ground water monitoring program to demonstrate the success or failure of the corrective action.[107] In addition to the above, the owner or operator must also remove or treat in place any hazardous constituent[108] exceeding defined contamination limits[109] in the ground water.[110] The corrective action program must be continued for as long as the ground water protection standard is being exceeded.[111]

Corrective action "necessary to protect human health and the environment" is also required for all releases of hazardous waste from any "solid waste management facility."[112] Those owners or operators must demonstrate such corrective action regardless of the time when the hazardous wastes were placed in the unit.[113] The requisite corrective action will be contained in the permit, along with a schedule for compliance and financial assurance requirements.[114] The responsibilities for corrective action also extend beyond the facility's property line unless the EPA is satisfied that the owner or operator used its best efforts but was unable to obtain permission for the correction action.[115] Even when permission is denied, the owner or operator remains responsible for the cleanup of any release beyond the property boundary.[116] Generally, the necessary measures for cleanup of these releases will be determined on a case-by-case basis.[117]

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[106] *Id.* § 264.100(c).

[107] *Id.* § 264.100(d).

[108] *See Id.* § 264.93 (defining "hazardous constituent").

[109] *See Id.* § 264.94 (outlining concentration limits).

[110] *Id.* § 264.100(e).

[111] *Id.* § 264.100(f).

[112] A "solid waste management facility" includes (A) any resource recovery system or component thereof, (B) any system, program, or facility for resource conservation, and (C) any facility for the collection, source separation, storage, transportation, transfer, processing, treatment or disposal of solid waste, including hazardous waste, whether such facility is associated with facilities generating such wastes or otherwise." 42 U.S.C. § 6903(29) (1982).

[113] 40 C.F.R. § 264.101(a) (1989).

[114] *Id.* § 264.101(b).

[115] *Id.* § 264.101(c).

[116] *Id.*

[117] *Id.*

E. State Hazardous Waste Programs

Section 3006 of RCRA[118] authorizes the delegation of the federal RCRA Subtitle C hazardous waste program to the states.[119] Under the mandate of RCRA § 3006(a),[120] the EPA promulgated state hazardous waste regulations.[121] These regulations require primarily (1) the establishment of a state program to include provisions equivalent to the corresponding federal regulations,[122] (2) sufficient authority for enforcing the state program,[123] and (3) the execution of a memorandum of agreement (MOA) between the state and the EPA regional administrator.[124]

Under the authority of Mississippi's Solid Wastes Disposal Law,[125] the Commission on Environmental Quality has adopted as state regulations the EPA hazardous waste regulations required for an authorized state program set forth above.[126] In addition, the EPA regulations covering general hazardous waste programs,[127] hazardous waste identification,[128] and land disposal restrictions[129] have been adopted as state regulations.[130] The enforcement authority of the Solid Wastes Disposal Law,[131] including provisions for civil penalties up to $25,000 per day,[132] satis-

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[118] RCRA § 6926, 42 U.S.C. § 6926 (1982 & Supp. 1990).

[119] *Id.* § 6926(b) (Supp. 1990).

[120] *Id.* § 6926(a) (1982).

[121] 40 C.F.R. § 271 (1989).

[122] *Id.* §§ 271.09-.14; *see* § 124 (procedures for decision-making); § 243 (1989) (hazardous waste transporter regulations); § 262 (1989) (hazardous waste generator regulations); § 264 (1989) (regulations for owners and operators of permitted hazardous waste facilities); § 266 (1989) (standards for management of special hazardous wastes and facilities); § 270 (1989) (federally administered hazardous waste permit program regulations).

[123] *Id.* § 271.16.

[124] *Id.* § 271.8.

[125] Solid Wastes Disposal Law of 1974, MISS. CODE ANN. §§ 17-1-1 to -55 (Supp. 1990).

[126] MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY, BUREAU OF POLLUTION CONTROL, HAZARDOUS WASTE MANAGEMENT REGULATIONS (Mar. 22, 1989) [hereinafter STATE HAZARDOUS WASTE REGULATIONS].

[127] 40 C.F.R. § 260 (1989).

[128] *Id.* § 261.

[129] *Id.* § 268.

[130] STATE HAZARDOUS WASTE REGULATIONS, *supra* note 125.

[131] MISS. CODE ANN. § 17-17-29 (Supp. 1990).

[132] *Id.* § 17-17-29(5).

fies the EPA state program requirements.[133] On June 13, 1984, EPA Region IV authorized the DEQ to operate its hazardous waste program.[134] Additionally, the DEQ and the Regional Administrator of EPA Region IV in Atlanta, Georgia, have executed a memorandum of agreement in accordance with EPA regulations.[135]

Under the Memorandum of Agreement, the DEQ is responsible for (1) "that part of the RCRA hazardous waste program that was in effect prior to passage of the RCRA amendments" and (2) "assisting EPA in administering the permitting provisions of HSWA."[136] The EPA is "responsible for implementing the permitting provisions of HSWA, until the state receives authorization for all or a portion of the HSWA provisions."[137] The state permit issued pursuant to the Mississippi hazardous waste management regulations must cover that portion of the RCRA program in effect prior to the passage of HSWA and the EPA permit must cover the requirements brought about by HSWA.[138] These include regulations concerning corrective action within and beyond facility boundaries and waste minimization.[139] "Only

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[133] 40 C.F.R. § 271.16 (1989).

[134] *See* 49 Fed. Reg. 24,377 (1984) (granting DEQ pre-HSWA responsibility for permitting TSDF's and for carrying out other aspects of the RCRA program and primary enforcement responsibility under RCRA § 3008).

[135] Memorandum of Agreement Between the State of Mississippi and the U.S. E.P.A. (executed by Greer C. Tidwell, EPA Region IV Regional Administrator on October 7, 1988, and by James I. Palmer, Jr., Executive Director of the Miss. Dep't of Natural Resources) [hereinafter MOA].

[136] *Id.* at 9.

[137] *Id.*

[138] *Id.* at 10.

[139] *See* 53 Fed. Reg. 31,000 (Aug. 17, 1988) (final authority of Mississippi hazardous waste management system); OSWER Policy Directive No. 9541.00-11, Table A-1, pp. A-2f-j.) As explained in this table, RCRA program authority is grouped into "clusters" of rights chronologically divided into non-HSWA and HSWA divisions. Non-HSWA clusters I-V and non-HSWA requirements prior to cluster I cover the period of January 26, 1983, through June 30, 1989. HSWA clusters I and II cover the period of November 8, 1984, through June 30, 1990. *Id.* at a-2a. The DEQ has been delegated the non-HSWA cluster authority by EPA while EPA administers and retains primacy over HSWA cluster rights. These HSWA clusters over which EPA retains primacy include the self-executing provisions concerning small quantity generators and land ban restrictions. The end result of this delegation is that the DEQ administers and enforces (1) the non-HSWA RCRA regulations and (2) the Mississippi Hazardous Waste Regulations, which constitute the full range of HSWA and non-HSWA RCRA regulations.

the two permits together will constitute a valid RCRA permit."[140] The EPA has responsibility for enforcing the federal portion of the RCRA permits, while the DEQ enforces the delegated RCRA permit provisions.[141]

The Mississippi Solid Wastes Disposal Law prohibits the issuance of a permit for a commercial hazardous waste landfill until the EPA land ban regulations are fully implemented.[142] The Act also prohibits underground injection of hazardous wastes with certain exceptions.[143] The 1990 Mississippi Legislature enacted the Hazardous Waste Facility Siting Act, which establishes a process for the siting of a state commercial hazardous waste management facility.[144] Also enacted in the 1990 session was the Mississippi Comprehensive Multi-Media Waste Minimization Act, which established a non-regulatory waste minimization program within the Department of Environmental Quality for large and small quantity hazardous waste generators.[145]

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[140] MOA, *supra* note 134, at 10.

[141] *Id.*

[142] MISS. CODE ANN. § 17-17-15(2) (Supp. 1990). The third has been adopted by the EPA and therefore, state prohibitions have been terminated. 55 Fed. Reg. 22520 (1990).

[143] MISS. CODE ANN. § 17-17-27(4) (Supp. 1990). The disposal of hazardous waste generated in oil and gas production and in a commercial or manufacturing operation is exempt under the above provision. *Id.*

[144] S. No. 25,25 (signed by Governor Ray Mabus on April 2, 1990). This act was passed in part to comply with CERCLA § 104(c)(9), 42 U.S.C. § 9604(c)(9) (Supp. 1990). This section of CERCLA requires each state to provide a "capacity assurance plan" to the EPA, assuring the state's ability to adequately treat and dispose of all hazardous waste reasonably expected to be generated within that state over the next 20 years through (1) a hazardous waste treatment or disposal facility within the state, or (2) through the use of an out-of-state facility in accordance with an interstate or original agreement. *Id.* Passage of the act was fueled in part by the enactment by the Alabama Legislature of a law banning disposal in Alabama of hazardous waste generated in Mississippi and other states. The constitutionality of this law was originally upheld by the district court for the Northern District of Alabama in Nat'l Solid Wastes Management Ass'n v. Alabama Dep't of Envtl. Management, 729 F. Supp. 792, 804 (N.D. Ala. 1990).

[145] S. No. 2568, (signed by Governor Ray Mabus on April 2, 1990). This bill required large and small quantity generators of hazardous waste, as defined in RCRA and, by adoption, the Mississippi Hazardous Waste Regulations, to submit waste minimization plans. This plan requirement also applies to facility operators required to file a report under § 313 of the Emergency Planning and Community Right-To-Know Act. These large and small quantity generators and facility operators are also assessed a waste minimization tax under the act, in accordance with the tons of hazardous waste generated. This tax ranges from $250 for less than 10 tons generated in a year to $50,000 for 50,000 tons or more generated in a year. The act also plays a part in satisfaction of CERCLA

F. Enforcement

The EPA may enforce Subtitle C of RCRA by administrative orders and civil and criminal penalties.[146] Civil penalties may be assessed in amounts up to $25,000 per day.[147] Criminal enforcement for "knowing" violations consists of penalties of up to $50,000 per day or two years imprisonment or both.[148] Additionally, "knowing endangerment violations," defined as the placing of another person in imminent danger of death or serious bodily injury, may result in penalties of up to $250,000 or up to 15 years' imprisonment or both.[149] "Organization" defendants are subject to fines up to $1 million for a knowing endangerment conviction.[150]

In addition to its enforcement authority under RCRA § 3008, the EPA may restrain and correct "an imminent and substantial endangerment to health or the environment."[151] These corrective actions may be brought against any past or present generator, transporter, or owner or operator of a TSDF or any other person who has contributed or is contributing to the imminent hazard.[152] Citizen suits may also be brought against RCRA violators.[153]

II. Subtitle D—Non-Hazardous Solid Waste Regulation

A. State Waste Management Plans

Under Subtitle D of RCRA, non-hazardous waste manage-

Capacity Assurance Plan requirements.

[146] RCRA § 3008, 42 U.S.C. § 6928 (1982 & Supp. 1990).

[147] RCRA § 3008(a), 42 U.S.C. § 6928(g) (1982).

[148] *Id.* § 6928(d)(7)(B).

[149] RCRA § 3008(e), 42 U.S.C. § 6928(e) (Supp. 1990).

[150] *Id.* An oranization is defined as "a legal entity, other than a government, established or organized for any purpose, and such team includes a corporation, company, association, firm, partnership, joint stock company, foundation, institution, trust, society, union, or any other association of persons." *Id.* § 3008(f)(5), 42 U.S.C. § 6928(f)(5).

[151] RCRA § 7003(a), 42 U.S.C. § 6973(a) (Supp. 1990).

[152] *Id.*; *see* 40 C.F.R. § 24 (1989) (EPA regulations on issuance of interim status corrective action orders). On July 27, 1990, EPA published a proposed subparts to 40 C.F.R. § 264, which sets forth more stringent and expansive corrective actions. 55 Fed. Reg. 39798 (1990).

[153] RCRA § 9002, 42 U.S.C. § 6972 (1982 & Supp. 1990).

ment is the responsibility of the states.[154] Pursuant to section 4002 of the RCRA[155], the EPA promulgated guidelines for the preparation of state solid waste management plans (State Plans).[156] Requirements for the State Plans include (1) a prohibition on the establishment of new "open dumps"[157] within the state; (2) the requirement that all non-hazardous solid wastes be (a) utilized for resource recovery[158], or (b) disposed of in sanitary landfills; (3) mandatory closing or upgrading of existing open dumps within the requirements of section 4004 of the RCRA;[159] (4) the establishment of state regulatory power necessary to implement the State Plans; and (5) a provision for resource conservation[160] or recovery and for disposal of solid waste in sanitary landfills.[161]

B. Landfill Criteria

Section 4004 of RCRA required the EPA to promulgate regulations setting forth criteria for sanitary landfills and classification of open dumps.[162] These regulations, effective as of October 15, 1979, established criteria for solid waste disposal facilities to protect (1) floodplains, (2) endangered species, (3) surface waters, (4) ground waters, (5) land used for the production of food chain crops, (6) personal exposure to diseases, (7) air, and (8) personal safety.[163] Any facilities or practices that violate these

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[154] RCRA § 4001, 42 U.S.C. § 6941 (Supp. 1990).

[155] 42 U.S.C. § 6942 (1982).

[156] 50 C.F.R. § 256 (1989).

[157] An "open dump" is defined as "any facility or site where solid waste is disposed of which is not a sanitary landfill which meets the criteria promulgated under section 6944 of this title and which is not a facility for disposal of hazardous waste." RCRA § 1004(14), 42 U.S.C. § 6903(14) (1982). A "sanitary landfill" is defined as "a facility for the disposal of solid waste which meets the criteria published under section 6944 of this title." *Id.* § 6903(26).

[158] "Resource recovery" is defined as "recovery of material or energy from solid waste." RCRA § 1004(22), 42 U.S.C. § 6903(22) (1982).

[159] 42 U.S.C. § 6945 (Supp. 1986).

[160] "Resource conservation" is defined as "reduction of the amounts of solid waste that are generated, reduction of overall resource consumption, and utilization of recovered resources." RCRA § 1004(21), 42 U.S.C. § 6903(21) (1982).

[161] RCRA § 4003(a), 42 U.S.C. § 6943(a) (1982).

[162] RCRA § 4004(a), 42 U.S.C. § 6944(a) (1982).

[163] 40 C.F.R. § 257.3 (1989).

criteria are deemed in the regulations to "pose a reasonable probability of adverse effects on human health or the environment."[164] The EPA does not currently have authority to enforce these criteria except in limited situations involving the disposal or handling of certain sludge material. Enforcement is accomplished through state regulatory programs or citizen suits.[165]

On August 30, 1988, the EPA proposed regulations to modify the criteria for "municipal solid waste landfills" (MSWLs).[166] The current regulations would be amended in pertinent part to (1) include information requirements for owners and operators of industrial solid waste disposal facilities and construction/demolition waste landfills and (2) exclude MSWLs from Part 257. A new Part 258 would be added to provide specific revised criteria for MSWLs. These revised criteria are in the form of performance standards, including location restrictions, facility design and operating criteria, closure and post-closure care, financial assurance for post-closure care and cleanup, ground water monitoring and corrective action requirements.[167]

When promulgated and implemented, these new regulations will substantially affect public and private landfills that meet the definition of municipal solid waste landfills, both from the standpoint of technical construction standards and economic assurances. Once the data from the information requirements discussed above have been collected and analyzed, a second phase of criteria revisions addressing solid waste management facilities other than MSWLs may be proposed by the EPA.[168] Because these proposed regulations have not been finalized or promulgated, further discussions are beyond the scope of this article.

C. State Solid Wastes Program

Under authority of the Mississippi Solid Wastes Disposal

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[164] *Id.*

[165] 53 Fed. Reg. 33,317 (1988).

[166] 53 Fed. Reg. 33,314, 33,405, 33,406 (1988). The proposed criteria seek to amend 40 C.F.R. § 257 (1989).

[167] *Proposed Revisions to Criteria for Municipal Solid Waste Disposal Landfills: A Summary*, U.S. EPA Office of Solid Waste (Aug. 22, 1988), p. 2.

[168] *Id.* at 2-3.

Law,[169] the Commission on Environmental Quality has promulgated non-hazardous waste management regulations to satisfy EPA regulations.[170] These regulations establish permit programs for solid waste landfills,[171] rubbish disposal facilities,[172] processing facilities[173] and solid waste land farming[174] sites. Civil enforcement under the Mississippi Solid Wastes Disposal Law consists of the authority to enforce permanent and temporary injunctions, the assessment of penalties of up to $25,000 per day, and reimbursement costs for the restoration of wildlife. Criminal penalties of up to $25,000 per day and/or imprisonment up to one year can also be imposed.[175] The Mississippi Legislature established a one-year moratorium ending April 1, 1991, on new or expanded non-hazardous solid waste facilities for the incineration, treatment, processing, or disposal of solid wastes to permit the State of Mississippi to "study and consider" a statewide solid waste management plan.[176]

III. Subtitle I—Underground Storage Tanks

The 1984 HSWA amendments to RCRA provide for a comprehensive regulatory program for underground storage tanks (USTs) as Subtitle I of RCRA.[177] Subtitle I applies to USTs that have been or are being used to accumulate "regulated substances," which are defined as petroleum and CERCLA (Superfund) hazardous substances.[178] Tanks used for the storage

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[169] Miss. Code Ann. § 17-17-27 (Supp. 1990).

[170] Mississippi Department of Natural Resources, Bureau of Pollution Control, Regulation No. PC/S-1 (June 1987).

[171] *Id.* § D.

[172] *Id.* § E.

[173] *Id.* § F.

[174] *Id.* § G.

[175] Miss. Code Ann. § 17-17-29 (Supp. 1990).

[176] H.R. 913, (signed by Governor Mabus on April 3, 1990).

[177] RCRA §§ 9001-9010, 42 U.S.C. § 6991(a)-(i) (Supp. 1990). "Underground storage tanks" are defined as "any one or combination of tanks (including underground pipes connected thereto) which is used to contain an accumulation of regulated substances, and the volume of which (including the volume of the underground pipes connected thereto) is 10 per centum or more beneath the surface of the ground." RCRA § 9001(1), 42 U.S.C. § 6991(1) (Supp. 1990).

[178] RCRA § 9001(2), 42 U.S.C. § 6991(2) (Supp. 1990); *see also* 40 C.F.R. § 302 (1989) (CERCLA Hazardous Substance List).

of hazardous waste regulated under Subtitle C of RCRA are excluded.[179] Subtitle I first required notification on May 8, 1986, by UST owners to the designated state agency, the Department of Environmental Quality in Mississippi, concerning the age, size, type, location, and uses of operating USTs and USTs taken out of operation after January 1, 1974.[180] Subtitle I also required the EPA to promulgate regulations concerning (1) release detection, prevention, and cleanup;[181] (2) proof of financial responsibility to ensure that UST owners and operators are able to clean up UST releases and pay for related third party claims; and (3) performance standards for new tanks brought into operation after the effective dates of the standards.[182]

Effective on December 22, 1988, the EPA first promulgated regulations for tank performance and management.[183] Subsequently, effective as of January 24, 1989, the EPA promulgated financial responsibility standards for owners and operators of petroleum UST's.[184] The requirements for petroleum UST's and hazardous substance UST's will be discussed separately.

A. Petroleum Underground Storage Tanks

1. New Tanks

a. Correct Installation

New USTs (those installed after December 22, 1988),[185] must be installed by qualified installers who follow industry codes concerning excavation, tank system, siting and burial depth, tank system assembly, back filling of the tank system and surface grading.[186] The owner or operator of the tank must cer-

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[179] *See* 40 C.F.R. § 261 (1989) (listing Subtitle C hazardous waste which was excluded under underground storage tank portion of RCRA).

[180] RCRA § 9002(a)(1)-(2), 42 U.S.C. § 6991(b)(1)-(2) (Supp. 1990). USTs taken out of operation before January 1, 1974, are not subject to Subtitle I. *Id.*

[181] Release is defined as "any spilling, leaking, emitting, discharging, escaping, leaching, or disposing from an underground tank into ground water, surface water or subsurface soils." RCRA § 9001(5), 42 U.S.C. § 6991(5) (Supp. 1990).

[182] RCRA § 9003, 42 U.S.C. § 6991(b) (Supp. 1990).

[183] 53 Fed. Reg. 37,082-37,213 (1988).

[184] *Id.* at 43,320-43,370, 44,990.

[185] 40 C.F.R. § 280.12 (1989).

[186] *Id.* § 280.20(d).

tify a notification form to the state agency that a qualified installer has been used.[187]

b. Spill and Overfill Protection

The regulations specify correct tank filling procedures and require spill prevention devices, such as spill catchment basins or dry disconnect couplings.[188] Additionally, overfill protection devices, such as those that (1) automatically shut off the flow, (2) restrict the flow, or (3) trigger an alarm when the tank is nearly full, are required.[189]

c. Corrosion Protection

Tanks must be made of a non-corrodible material, such as corrosion protected steel fiberglass-reinforced plastic. If the tank is made of steel, either it must be coated with a corrosion resistant coating and cathodically protected, or a thick layer of non-corrodible material must be bonded to the tank.[190] Steel piping also must be cathodically protected.[191]

d. Leak Detection

Tanks must be checked once a month to determine whether they are leaking. Leak detection can be accomplished by one or a combination of the following methods: (1) automatic tank gauging; (2) monitoring for vapors in the soils; (3) interstitial (between the walls) monitoring for double-walled tanks and lines; and (4) monitoring for liquids in the ground water and other approved methods.[192] Alternatively, for ten years after the installation of the UST, leak detection can be satisfied by combining monthly inventory control with tank tightness testing every five years.[193] After ten years, one of the monthly monitor-

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[187] *Id.* § 280.20(e).
[188] *Id.* § 280.20(c)(1).
[189] *Id.*
[190] *Id.* § 280.20(a).
[191] *Id.* § 280.20(b).
[192] *Id.* §§ 280.41(a), .43(d)-(h).
[193] *Id.* §§ 280.41(a), .43(a)-(c).

ing methods mentioned above must be used.[194] Leak detection for piping is also required.[195]

2. Existing Petroleum USTs

Existing petroleum USTs must meet the corrosion protection and spill and overflow prevention requirements discussed above by December 22, 1998, ten years after the effective date of the regulations.[196] Leak detection requirements are phased in for existing USTs, depending on their age. The phase-in deadlines range from December, 1989, for tanks installed before 1965, to December, 1993, for tanks installed between 1980 and 1988.[197] The schedule is intended to make sure that old USTs, which are more likely to leak, have leak detection first. Any existing UST that cannot meet these requirements at the deadlines provided must be closed in accordance with the closure and corrective action requirements.[198]

3. Corrective Action

When a leak or spill (including an overfill) is confirmed by an owner or operator of a UST,[199] he must take the following actions:

(1) Take immediate action to stop and contain the leak or spill;

(2) Notify the regulatory authority within twenty-four hours that there is a leak or spill, unless the amount is less than twenty-five gallons and can be immediately contained and cleaned up;

(3) Ensure that the leak or spill poses no immediate hazard to human health and safety by removing explosive vapors and fire hazards, and ensure the proper handling of contaminated

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[194] *Id.* § 280.41(a).

[195] *Id.* § 280.41(b).

[196] *Id.* § 280.21.

[197] *Id.* § 280.40.

[198] *Id.* § 280.40(d), .21(a); *see also Id.* § 280.60-.74.

[199] The UST regulations also provide for measures to be taken by a tank-owner or operator in the event a leak is suspected. *See Id.* §§ 280.50-.53 (outlining regulatory procedures to be taken in event of suspected leak).

soil so that it poses no hazard;

(4) Find out how far the petroleum has leaked;

(5) Report progress and any information collected to the regulatory authority no later than twenty days after confirmation of the leak or spill; and

(6) Investigate to determine if the leak has damaged or might damage the environment and report to the regulatory authority the results of the investigation within forty-five days of confirming a leak or spill. The report must also contain a plan to remove the leaked petroleum if the investigation reveals contaminated ground water. Additional site studies may be required as necessary.[200]

On the basis of the information provided in the investigation, the regulatory agency will decide if further action is required at the site. Such additional action may include the development and implementation of a corrective action plan to meet cleanup requirements established for the site.[201] Leaking tanks may be repaired and returned to service if certain restrictions are met.[202]

4. Tank Closure

If a tank does not have corrosion protection and it remains closed for more than twelve months, or the decision is made by the tank owner to close it permanently, the following requirements must be accomplished:

(1) Notification to the regulatory agency thirty days before the UST is to be closed;

(2) Investigation of the tank and its surrounding soil for leaks that may have damaged the surrounding environment. If there is damage, then corrective action will be required; and

(3) The UST may be removed from the ground or left in the ground. In either case, the tank must be emptied and cleaned by removing all liquids, dangerous vapor levels and accumulated sludge, according to standard safety practices. If the UST is left in the ground, it must be filled with a harmless, chemically inac-

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[200] *Id.* §§ 280.53, .61-.66.

[201] *Id.* § 280.66.

[202] *Id.* § 280.33.

tive solid, like sand.[203]

Tanks that are not used for three to twelve months may be temporarily closed.[204] If the UST to be temporarily closed has corrosion protection and leak detection, these protective systems must be continued. All lines attached to the UST, except the vent line, must be capped in the event of temporary closure.[205]

5. Financial Responsibility

Owners of petroleum USTs must demonstrate their ability to pay for damages that could be caused by leaks in their tanks. These damages include both the cost of cleaning up the leaked petroleum, correcting environmental damage, supplying alternative drinking water, and compensating people for personal injury or property damage. These regulations went into effect on January 24, 1989, and phase in financial responsibility from January, 1989, to October, 1991, based on the number of tanks for petroleum marketers and on the business net worth for non-marketers.[206]

The amount of financial responsibility set forth in the regulations can be summarized as follows:

(1) For petroleum marketers and for non-marketers having a collective through put of more than 10,000 gallons per month—(a) $1,000,000 of "per occurrence" coverage, which means the coverage that must be available to pay the cost of one leak, and (b) annual aggregate coverage, meaning the total amount of financial responsibility that must be carried to cover all leaks that might occur in one year, which is dependent on the number of tanks that are owned or operated as follows: (i) 1 to 100 tanks—$1,000,000 and (ii) 101 or more tanks—$2,000,000.

(2) For non-marketers having a monthly through put of 10,000 gallons or less—(a) $500,000 of "per occurrence" coverage

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[203] *Id.* § 280.71; *see also id.* § 280.70 (outlining procedures and requirements for temporary, as opposed to permanent, closure).

[204] Tanks taken out of service for three months are subject to closure. This closure may be temporary or permanent. Tanks which have been temporarily closed are subject to permanent closure once they have been out of service for twelve months. 40 C.F.R. §§ 280.70-.71.

[205] *Id.* § 280.70.

[206] *Id.* § 280.91.

and (b) annual aggregate coverage of (i) $1,000,000 for non-marketers with 100 or fewer tanks and (ii) $2,000,000 for those having more than 100 tanks.[207]

The financial responsibility may be met by any one or a combination of insurance, guarantee, surety bond, letter of credit, qualification as a self-insurer, risk retention group, state fund, or trust fund.[208]

B. Hazardous Substance USTs

New hazardous substance USTs must meet the same requirements described for new petroleum USTs concerning correct installation, corrosion protection, spill and overfill prevention, leak detection, corrective action and closure.[209] However, there must also be a secondary containment system.[210] Essentially, this system requires double-wall tank construction, external linings, and underground pipe lining to prevent a leak into the soil should the inner wall fail.[211] The regulations also require an extensive monitoring program to include a combination of soil, vapor, and interstitial (between the walls) verification that a leak has not occurred.[212]

With regard to corrective action for a hazardous substance leak, the same short-term and long-term actions described above for petroleum leaks and spills must be followed.[213] There are, however, two modified short-term actions. First, the owner or operator of the tank must immediately report hazardous chemical spills or overfills that meet or exceed the reportable quantities to the National Response Center.[214] Second, hazardous chemical spills or overfills that meet or exceed the reportable quantities must also be reported to the regulatory agency within twenty-four hours.[215] If the leak is smaller than the reportable

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[207] *Id.* § 280.93.
[208] *Id.* §§ 280.94-.103.
[209] *See supra* notes 184-203 and accompanying text.
[210] 40 C.F.R. § 280.42 (1989).
[211] *Id.*
[212] *Id.* § 280.43.
[213] *See supra* notes 198-201 and accompanying text.
[214] 40 C.F.R. § 280.53 (1989); *see also id.* § 302.
[215] *Id.*

quantities and can be immediately contained and cleaned up, only the regulatory agency must be notified.[216]

C. State UST Programs

Section 9004 of RCRA[217] authorizes any state to submit an underground storage tank release detection, prevention, and correction program for review and approval by the EPA. A state program may be approved by the EPA if the state demonstrates that its program is no less stringent than the federal program and that it provides for adequate enforcement of compliance and can provide adequate enforcement authority.[218]

On February 20, 1990, Mississippi became the first state to receive tentative EPA approval for a state underground storage tank program.[219] In 1988, the Mississippi Legislature enacted the Mississippi Underground Storage Tank Act.[220] In addition to providing for DEQ regulatory authority over USTs[221] containing "regulated substances,"[222] the Act established a Groundwater Protection Trust Fund that satisfies the federal UST financial assurance requirements for petroleum USTs.[223] The trust fund provides reimbursement to UST owners[224] for the cleanup of re-

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[216] *Id.* § 280.53(h).

[217] RCRA § 9004, 42 U.S.C. § 6991c (Supp. 1990).

[218] *Id.* § 9004(b), (d), 42 U.S.C. § 6991c(b)-(d).

[219] 55 Fed. Reg. 5861 (1990).

[220] Mississippi Underground Storage Tank Act, MISS. CODE ANN. §§ 49-17-401 to -433 (Supp. 1990).

[221] The federal definition of underground storage tanks is adopted in the Act. MISS. CODE ANN. § 49-17-403(j) (Supp. 1990).

[222] "Regulated substances" are defined as "(i) any substance defined in Section 101(14) of [CERCLA], as amended and extended (but not including any substance regulated as a hazardous waste under Section 17-17-1 et seq., Miss. Code of 1972); and (ii) petroleum, including crude oil or any fraction thereof, which is liquid at standard conditions of temperature and pressure. . . ." MISS. CODE ANN. § 49-17-403(i) (Supp. 1989).

[223] MISS. CODE ANN. § 49-17-405 (Supp. 1990). The trust fund is funded by an environmental protection tax on "motor fuels" of 2/10 of 1 cent per gallon, which is designed to maintain a balance of $4 to $6 million for paying for clean-up of releases from USTs and third party judgments. *Id.* § 49-17-407.

[224] "Owner of an underground storage tank" is defined to mean "(i) [i]n the case of an underground storage tank in use on November 8, 1984, or brought into use after that date, any person who owns an underground storage tank used for the storage, use or dispensing of regulated substances; and (ii) [i]n the case of an underground storage tank in use before November 8, 1984, but no longer in use on that date, any person who

leases of motor fuels and payment of third party judgments.[225] Amounts covered by the trust fund are from $5,000 to $1,000,000 for cleanup costs and from $10,000 to $1,000,000 for third party judgments.[226] However, during a "grace period" from May, 1988, to June 30, 1992, the trust fund covers $1,000,000 for cleanup costs and $1,000,000 for third party judgments with no "deductible."[227]

The Commission on Environmental Quality has adopted regulations for administering the trust fund during the grace period.[228] The Commission also adopted federal UST regulations codified in 40 C.F.R. Part 280 as state UST regulations.[229] More recently, the Commission adopted regulations for certification of persons who install, remove, and repair USTs.[230]

D. Enforcement

The enforcement provisions of RCRA authorize the EPA to issue a compliance order against any person in violation of any requirement of Subtitle I as well as any EPA regulations promulgated under it.[231] The EPA may also commence a civil action in the United States District Court in which the violation occurred for appropriate relief, including a temporary or permanent injunction.[232] If a violator fails to comply with a compliance

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owned such tank immediately before the discontinuation of its use." *Id.* § 49-17-403(f).

[225] MISS. CODE ANN. § 49-17-407(5) (Supp. 1990).

[226] *Id.* In the 1990 regular session of the Mississippi Legislature, House Bill No. 402 lowered the clean-up costs deductible from $100,000 to 5,000 and lowered the third-party litigation deductible from $300,000 to $10,000. H.R. 402 was signed by Governor Ray Mabus on April 3, 1990.

[227] MISS. CODE ANN. § 49-17-409 (Supp. 1990). H.R. 402 extended the grace period for two years from May, 1990, to June 30, 1992. The purpose of the grace period is to "encourage early detection, reporting and clean up of contamination from leaking underground tanks containing motor fuel . . . ." *Id.*

[226] The Mississippi Groundwater Protection Trust Fund Regulations for Releases of Motor Fuels Occurring During the Grace Period as Provided for by the Underground Storage Tank Act (March 22, 1989).

[226] State of Mississippi Underground Storage Tank Regulations Sections 280.10 through 280.111 (March 22, 1989).

[230] Regulations for certification of UST installers, removers and repairers (January 24, 1990) (effective July 1, 1990). *See* MISS. CODE ANN. § 49-17-429 (Supp. 1990) (requiring certification of such personnel after July 1, 1990).

[231] RCRA § 9006(a), 42 U.S.C. § 6991e (Supp. 1990).

[232] *Id.* § 9006(a)(1), 42 U.S.C. § 6991e(a)(1).

order within the time specified in the order, civil penalties of not more than $25,000 for each day of continued non-compliance can be assessed.[233] If the violation occurs in a state with an EPA approved program, the EPA must give notice to the state in which the violation has occurred prior to the issuance of an order or the commencement a civil action.[234]

Any tank owner who knowingly fails to notify or submits false information is subject to a civil penalty of up to $10,000 for each tank for which notification is not given or for which false information is submitted.[235] An owner or operator of a UST who fails to comply with EPA regulations or a requirement of an approved state program or the interim prohibition provisions[236] is subject to a civil penalty of not more than $10,000 for each tank for each day of violation.[237] Violations of the Mississippi Underground Storage Tank Act and the regulations promulgated under it may carry civil penalties of up to $25,000 per day.[238]

HAZARDOUS MATERIALS TRANSPORTATION ACT (HMTA)

The Hazardous Materials Transportation Act (HMTA)[239] was passed in order to promote and enhance the safe movement of "hazardous materials" through the transport system of the United States. Regulations promulgated pursuant to the HMTA are administered by the Department of Transportation (DOT).[240] The term, "hazardous materials" (HM), refers specifically to those materials listed in the HM table.[241] Transportation of these HMs requires shippers to satisfy five regulatory conditions: (1) use of DOT-approved containers; (2) marking of containers; (3) labeling of containers; (4) shipping papers; and (5)

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[233] *Id.*, § 9006(a)(3), 42 U.S.C. § 6991c(a)(3).

[234] *Id.* § 9006(a)(2), 42 U.S.C. § 6991e(a)(2).

[235] *Id.* § 9006(d)(1), 42 U.S.C. § 6991e(d)(1).

[236] *Id.* § 90003(g), 42 U.S.C. 6991(g). These prohibitions govern the installation of UST's in the time period before the EPA regulations were promulgated. *Id.*

[237] *Id.* § 9006(d)(2), 42 U.S.C. § 6991e(d)(2).

[238] MISS. CODE ANN. § 49-17-427(2) (Supp. 1990).

[239] 49 U.S.C. §§ 1802-1812 (1982).

[240] 49 C.F.R. §§ 170-195 (1989).

[241] *Id.* § 172.101.

placarding of vehicles.[242] Any person who offers hazardous materials for transport must instruct each employee having any responsibility for shipment as to the applicable regulations.[243] These regulations may apply to brokers, forwarding agents, freight forwarders, and warehouses.[244]

A variety of containers are approved for the shipping of hazardous materials.[245] The shipper has the responsibility of ensuring the compatibility of containers and contents.[246] Restrictions also apply to the type and maximum size of containers used to ship materials depending on the mode of transportation chosen.[247]

All containers containing hazardous materials are required to be marked with the proper DOT shipping name.[248] This is to include the shipping name,[249] hazard class,[250] and United Nations (UN)/North American (NA) identification number.[251] UN numbers are approved by the United Nations and are specific hazardous materials valid worldwide, while NA numbers are recognized only in the United States and Canada.[252] If the container contents are also classified as a hazardous substance, containers holding more than a reportable quantity must be marked.[253] Finally, the containers must be marked to display proper package orientation with an instruction such as "This Side Up".[254]

Containers of hazardous materials must also be labeled.[255] Labeling of packages should be completed with regard to both

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[242] *Id.* § 171.2.

[243] *Id.* §§ 173.1(b), 174.7, 175.20, 176.13, 177.800.

[244] *Id.* §§ 173.1(b), 174.7.

[245] *Id.* §§ 178.1-.343.

[246] *See* 49 C.F.R. § 172.101 col. 6 (1989) (listing applicable packaging requirement for each regulated substance).

[247] 49 C.F.R. §§ 172.101(h)-(i) (1989).

[248] *Id.* §§ 172.300-.338.

[249] *Id.* § 172.202(a)(1).

[250] *Id.* § 172.202(a)(2).

[251] *Id.* § 172.202(a)(3).

[252] *Id.* § 172.101(e).

[253] *Id.* § 172.324.

[254] *Id.* § 172.312.

[255] *Id.* §§ 172.400-.450, .101-.102.

mode of travel and final destination of materials.[256] Labeling differs from marking in that it requires specific placement of labels of prescribed size and content on the exterior of shipping containers.[257]

In order to facilitate emergency response in the event of a transportation accident containing hazardous materials, all shipments must have shipping papers describing the load contents.[258] The vehicle transporting hazardous materials must have their exteriors marked with placards based on the types and quantities of material carried by the vehicle.[259] Shipping papers may be a shipping order, bill of lading, manifest, or other shipping document[260] which is completed by the shipper prior to transport.[261] While there is no federally approved form for use as hazardous material shipping papers, the following information is required: (1) the proper shipping name of the material, hazard class, identification number, type of packaging, and total quantity;[262] (2) a description and methods of listing which clearly distinguishes between hazardous materials and non-hazardous materials if both are described on the same shipping papers[263]—for example, radioactive materials or empty packages; (3) additional descriptions as required for materials shipped by all modes[264] and/or for specific modes of transportation;[265] and (4) the shipper's certification that the materials offered for shipment are shipped in accordance with DOT regulations.[266]

A RCRA hazardous waste is considered a HMTA "hazard-

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[256] *Id.* § 172.407. Other sources of regulation include the International Civil Aviation Organization (ICAO), the International Maritime Organization (IMO) and Transportation of Dangerous Goods in Canada. *Id.* § 172.401.

[257] *Compare Id.* §§ 172.406, .407, .411 (labeling requirements) *with id.* §§ 172.300-.338 (1989) (marking requirements).

[258] *Id.* §§ 172.202-.205; *see also* 40 C.F.R. § 262.20 (1989) (EPA requirements for manifest papers).

[259] 49 C.F.R. §§ 172.500-.558 (1989).

[260] *Id.* § 171.8.

[261] *Id.* § 172.200(a).

[262] *Id.* § 172.202.

[263] *Id.* § 172.201(a)(1).

[264] *Id.* § 172.203.

[265] *See id.* §§ 174.203(g), 174.24 (rail); *id.* §§ 175.33-.35 (1989) (air); *id.* §§ 172.203(i), 176.24, .27, .30-.31 (1989) (water); *id.* §§ 172.203(a), (h), 177.817 (highway).

[266] *Id.* § 172.204.

ous material" while it is being transported off-site from the point of generation to a treatment, storage, and disposal facility.[267] The generator (shipper) is responsible for preparation of the material for shipment, manifesting, and placarding of vehicles.[268] The United States EPA Uniform Hazardous Waste Manifest[269] or a substitute required by the state of disposal is to be used as shipping papers for hazardous waste shipments.[270]

Enforcement under HMTA can include both civil[271] and criminal[272] penalties. Civil penalties can involve either remedial action or civil fines not to exceed $10,000 per violation.[273] Criminal penalties are not to exceed fines of $25,000, five years in prison, or both.[274]

COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT (CERCLA) AS AMENDED BY THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT (SARA)

Three major events in the 1970's sparked a national furor over the way hazardous wastes were being handled in the United States. In a small subdivision in Niagara, New York, the entire population had to be evacuated when it was discovered that twenty-five years of hazardous waste burial had contaminated the groundwater. That community was named, ironically, Love Canal. The national focus then shifted from Love Canal to the Valley of the Drums, where an immense deposit of leaking barrels was discovered in Kentucky. Finally, the small town of Times Beach, Missouri, was to suffer the consequences of contaminated soil and water when it was found that oil contaminated with dioxins was posing a threat to human health.[275]

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[267] 40 C.F.R. § 262.20 (1989).

[268] 49 C.F.R. § 172.3 (1989).

[269] *See* 40 C.F.R. § 262.20(a) (1989) (manifest must be prepared on EPA Form 8700-22 and, if necessary, EPA Form 8700-22A).

[270] 40 C.F.R. § 262.21 (1989).

[271] 49 C.F.R. §§ 107.307-.331 (1989).

[272] *Id.* §§ 107.333, .335.

[273] *Id.* §§ 107.315, .327, .329.

[274] *Id.* § 107.333.

[275] U.S. E.P.A., SUPERFUND: LOOKING BACK, LOOKING AHEAD, EPA No. OPA-87-007 (April 1987) at 1 [hereinafter SUPERFUND].

These events and others proved to be the catalyst for the formation of a national consensus to deal more effectively with the disposal and abandonment of the nation's hazardous wastes. In 1980 the consensus materialized in the form of the Comprehensive Environmental Response, Compensation and Liability Act.[276] The major objectives of the Act were:

> (1) To develop a comprehensive program to set priorities for cleaning up the worst existing hazardous waste sites;
> (2) To make "responsible parties" pay for those clean-ups whenever possible;
> (3) To set-up a $1.6 billion Hazardous Waste Trust Fund, popularly known as "Superfund," for the two-fold purpose of performing remedial cleanups in cases where responsible parties could not be held accountable, and responding to emergency situations involving hazardous substances; and
> (4) To advance scientific and technological capabilities in all aspects of hazardous waste management, treatment and disposal.[277]

Subsequently, on October 17, 1986, Congress reauthorized CERCLA by the passage of the Superfund Amendments and Reauthorization Act (SARA).[278] The major feature of the reauthorization was the increase of the hazardous response trust fund from $1.6 billion, available from 1980 to 1985, to $8.5 billion for Superfund activities during the period of 1986 to 1991.[279] SARA also introduced other changes to the Superfund program which impacted removal and remedial actions, strengthened enforcement authorities, increased state involvement, expanded research, development and training, increased citizen rights and provided a free-standing Emergency Planning and Community Right-to-Know Act.[280]

In concert with RCRA, CERCLA provides "wrap around"

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[276] Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§ 9601-9675 (1982 & Supp. 1990).

[277] SUPERFUND, *supra* note 273, at 2.

[278] Superfund Amendments and Reauthorization Act (SARA), Pub. L. No. 99-499, 100 Stat. 1673 (1986).

[279] CERCLA § 111(a), 42 U.S.C. § 9611(a) (Supp. 1990).

[280] Emergency Planning and Community Right-to-Know Act, 42 U.S.C. §§ 11001-11050 (Supp. 1990).

control over hazardous waste. Generally, while RCRA establishes a cradle-to-grave regulatory program for active hazardous waste sites, CERCLA establishes a comprehensive cleanup program for past hazardous waste practices at abandoned or inactive sites. However, the scope of CERCLA is broader than RCRA or any other federal environmental statute, in that it covers all environmental media. The primary scope of CERCLA is the cleanup of "hazardous substances."[281] This term encompasses any substance designated or regulated under all the major federal environmental statutes, including (1) hazardous substances under section 311 of the Clean Water Act,[282] (2) "toxic pollutants" under section 307 of the Clean Water Act,[283] (3) "hazardous waste" under section 3001 of RCRA,[284] (4) "hazardous air pollutants" under section 112 of the Clean Air Act,[285] (5) "imminently hazardous chemical substances or mixtures" under section 7 of the Toxic Substance Control Act (TSCA),[286] and (6) any "element, mixture, solution, or substance designated pursuant to Section 102" of CERCLA.[287]

I. EPA Cleanup Authority

The EPA is authorized to take action under section 104(a)(1) of CERCLA when there has been a release or substantial threat of release[288] into the environment of any hazardous substance or any pollutant or contaminant that may present an

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[281] 40 C.F.R. § 300.3 (1989).

[282] 33 U.S.C. § 1321 (1982).

[283] *Id.* § 1317.

[284] 42 U.S.C. § 6921 (1982).

[285] *Id.* § 7412.

[286] 15 U.S.C. § 2606 (1982).

[287] CERCLA § 101(14), 42 U.S.C. § 9601(14) (Supp. 1990). The definition excludes "petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under paragraphs (A) through (F) of this paragraph, and the term does not include natural gas, natural gas liquids, liquified natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas)." *Id.* The EPA has promulgated a list of all hazardous substances. *See* 40 C.F.R. § 302.4 (1986) (alphabetical listing of hazardous substances).

[288] *See* 55 Fed. Reg. 8839-8840 (1990) (to be codified at 40 C.F.R. § 300.400) ("release" broadly defined to include virtually every conceivable type of contact with environment); *see also* 42 U.S.C. § 9601(22) (Supp. 1990) (same); 40 C.F.R. § 300.6 (1989) (same).

imminent and substantial danger to the public health or welfare.[289] EPA response activity[290] may take the form of a removal action which is primarily temporary cleanup activity,[291] or a remedial action, which is permanent action.[292]

Priorities for action are established by each state and then by the EPA pursuant to the National Contingency Plan (NCP).[293] The NCP is the major framework regulation for the CERCLA Hazardous Substance Response Program.[294] The EPA published the National Priorities List (NPL), which contains 1,082 priority sites around the nation,[295] and has proposed to add 136 sites to that list. The NPL is updated at least once a year.[296] The EPA can spend remedial Superfund monies only on

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[289] CERCLA § 104(a)(1)42 U.S.C. § 9604 (Supp. 1990). "Pollutant or contaminant" covers essentially any other substance not on the EPA Hazardous Substance List which "will or may reasonably be anticipated to cause" almost any adverse physiological condition in "organisms or their offspring." CERCLA § 101(33), 42 U.S.C. § 9601(33) (Supp. 1990); 40 C.F.R. § 300.6 (1989). Oil and natural gas are excluded as they are from the definition of hazardous substance. *Id.* While the EPA has the authority to clean up both hazardous substances and pollutants and contaminants, parties may be held liable for clean-up costs and damages or injunctive liabilities for hazardous substances only. CERCLA §§ 106(a), 107(a), 42 U.S.C. §§ 9606(a), 9607 (Supp. 1990).

[290] CERCLA § 104(a)(1), 42 U.S.C. § 9604(a)(1) (Supp. 1990).

[291] *Id.* § 9604(a)(2). "Removal" includes clean-up or removal of released hazardous substances, monitoring, limiting access and temporary evacuation. CERCLA § 101(23), 42 U.S.C. § 9601(23) (Supp. 1990).

[292] "Remedial action" includes dredging or excavation, on-site treatment or incineration and repair or replacement of leaking containers. CERCLA § 101(24), 42 U.S.C. § 9601(24) (Supp. 1990).

[293] CERCLA § 105, 42 U.S.C. § 9605 (Supp. 1990); 55 Fed. Reg. 8813-8865 (1990) (to be codified at 40 C.F.R. § 300). The NCP was revised as of March 8, 1990. *See* 55 Fed. Reg. 8666-8865 (1990). The EPA cites to three major changes brought about by the 1990 NCP: (1) Subpart E of the new NCP overhauls the requirements of hazardous substance response, including an emphasis of the selection of treatment technologies and the encouragement of prompt and efficient remedial action; (2) Subpart F increases state involvement in the process through Superfund Memoranda of Agreement (SMOAs) and (3) Subpart I provides for the establishment of an administrative record for the remedy selection process. U.S. ENVIRONMENTAL PROTECTION AGENCY, QUESTIONS AND ANSWERS REGARDING THE 1990 NCP (February 1990) at 2 [hereinafter QUESTIONS AND ANSWERS].

[294] QUESTIONS AND ANSWERS, *supra* note 291, at 1.

[295] 55 Fed. Reg. 9688 (1990) (to be codified at 40 C.F.R. § 300 app. B). The NCP undergoes frequent updates by rulemaking. 55 Fed. Reg. 8666 (1990) (to be codified at 40 C.F.R. § 300); *see* 42 U.S.C. § 9605(a)(8)(B) (Supp. 1990) (President to consider priorities for remedial action submitted by states when annually revising national list of priorities).

[296] 55 Fed. Reg. 8845 (1990) (to be codified at 40 C.F.R. § 300.425(d)(4)). A precondition for any remedial actions financed with Superfund monies is the execution of a coop-

NPL sites.[297] Removal actions, including remedial planning activities, remedial investigations, preparation of feasibility studies and other actions taken pursuant to section 104(b) of CERCLA[298] are not limited to NPL sites.[299]

II. The CERCLA Remedial Process

Any action taken by the EPA must not be inconsistent with the NCP and must be "cost effective."[300] The NCP mandates the following process for accomplishing the remediation of a site:

A. Preliminary Assessment Site Investigation

Any hazardous substance release site which comes to the EPA's attention will be placed on EPA's CERCLA Information System (CERCLIS) inventory and data base of CERCLA sites.[301] These CERCLIS sites will receive a "preliminary assessment," composed primarily of a review of existing written information about a site to determine if additional investigation or action is required.[302] Sites not eliminated from consideration for the NPL at this stage will next receive a physical "site inspection."[303] After such an inspection, many sites will be candidates for a more thorough evaluation and "scoring" under the "haz-

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erative agreement between the state where the facility is located and EPA. The state must agree, among other things, to pay 10% of the costs of remediation, which increases to 50% or greater if the state or a county operated the facility at the time of disposal of hazardous substances at the facility. CERCLA § 104(c)(3), 42 U.S.C. § 9604(c)(3).

[297] 55 Fed. Reg. 8845 (1990) (to be codified at 40 C.F.R. § 300.425(b)(1)).

[298] CERCLA, 104(b), 42 U.S.C. § 9604(b) (Supp. 1990).

[299] 55 Fed. Reg. 8845 (1990) (to be codified at 40 C.F.R. § 300.425(b)(1)).

[300] CERCLA § 121(a), 42 U.S.C. § 9621(a) (Supp. 1990).

[301] 55 Fed. Reg. 8815 (1990) (to be codified at 40 C.F.R. § 300.5). CERCLA § 103 requires notice of hazardous substances by persons in charge of a "facility" and a quantity greater than certain "reportable quantities established by EPA pursuant to CERCLA § 102." *See* Fed. Reg. 8815 (1990) (to be codified at 40 C.F.R. § 300.5) (definition of "facility"); 40 C.F.R. § 302.3 (1989) (definition of "reportable quantity").

[302] 55 Fed. Reg. 8817, 8844 (1990) (to be codified at 40 C.F.R. § 300.5, 300.420(b)). A remedial preliminary assessment must be performed on all sites in CERCLIS (CERCLA Information System), which is the EPA's CERCLA data base that inventories and tracks hazardous substances under the Superfund program. 55 Fed. Reg. 8844 (1990); 55 Fed. Reg. 8815 (1990) (to be codified at 40 C.F.R. § 300.5).

[303] 55 Fed. Reg. 8845 (1990) (to be codified at 40 C.F.R. § 300.420(c)).

ardous ranking system" (HRS).[304] Under the HRS, also known as the "MITRE Model," pertinent data about a site are evaluated and scored.[305] A site may be given various scores for waste volume, waste toxicity, distance to population, distance to underground drinking water, and other factors.[306] If the site receives a HRS score of 28.5, it will be proposed by the EPA for inclusion on the NPL.[307] The proposal will be published in the Federal Register and a public comment period will be provided.[308] The Mississippi Department of Environmental Quality has executed annual cooperative agreements in which it has agreed to perform a portion of the CERCLA preliminary assessments, site inspections, and preparation of preliminary HRS scores.[309] If the site does not score high enough on the HRS to merit inclusion on the NPL, cleanup may be pursued by the state pursuant to its authority under the Air and Water Pollution Control Law[310] and the Solid Waste Disposal Law.[311] The EPA may use its authority under CERCLA § 106 to require clean up by responsible parties if there is an imminent and substantial endangerment.[312]

B. Remedial Investigation/Feasibility Study (RI/FS)

The Remedial Investigation (RI) and the Feasibility Study (FS) are two studies which are almost always performed to-

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[304] 55 Fed. Reg. 8816 (1990) (to be codified at 40 C.F.R. § 300.5); 55 Fed. Reg. 8845 (1990) (to be codified at 40 C.F.R. § 300.425(c)-(d)); *see* 42 U.S.C. § 9605(a)(8)(A) (Supp. 1986) (criteria for determining priorities among releases to be included in all NCP revisions).

[305] 40 C.F.R.§ 300 app. A (1990).

[306] *Id.*

[307] 55 Fed. Reg. 8845 (1990) (to be codified at 40 C.F.R. §§ 300.425(c)(1), (d)); 40 C.F.R. § 300 app; *see* 42 U.S.C. § 9605(a)(8)(B) (Supp. 1986) (discussing other limited means by which site may be placed on NPL); 55 Fed. Reg. 8845 (1990) (to be codified at 40 C.F.R. § 300.425(c)(2)-(3)).

[308] 55 Fed. Reg. 8845 (1990) (to be codified at 40 C.F.R. § 300.425(d)(5)).

[309] MISS. DEP'T OF ENVIRONMENTAL QUALITY, PRE-REMEDIAL COOPERATIVE AGREEMENT WORK PLAN FOR C490.

[310] *See, e.g.*, Mississippi Air and Water Pollution Control Law, MISS. CODE ANN. §§ 49-17-1 to 49-17-77 (1972 and Supp. 1990).

[311] *See, e.g.*, Solid Waste Disposal Law of 1974, MISS. CODE ANN. §§ 17-17-1 to -35 (Supp. 1990).

[312] 42 U.S.C. 9606(a).

gether.[313] The RI/FS may be conducted by the EPA or by "potentially responsible parties" (PRPs)[314] pursuant to a consent order executed between the EPA and the PRPs.[315]

The purpose of the RI is to collect all the data necessary to adequately characterize the site for purposes of determining a remedy for the hazardous substance problem at the site.[316] The RI will identify, among other elements, the pathways of possible migration or releases to the environment, and the extent of potential human or other environmental exposure to contamination.[317]

On the basis of RI information, the FS will present a series of specific engineering or construction alternatives for cleaning up a site from which an appropriate remedy can be selected.[318] For each major alternative presented, there will be a detailed analysis of nine factors:[319]

(1) Overall protection of human health and the environment,

(2) Compliance with ARARs,[320]

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[313] 55 Fed. Reg. 8846 (1990) (to be codified at 40 C.F.R. § 300.430).

[314] PRP is an undefined term utilized in CERCLA § 104 to describe those persons that EPA identifies as being potentially liable. 42 U.S.C. § 9604 (Supp. 1986). A PRP becomes a "responsible party" (RP) when it has been determined that the party has CERCLA liability. 42 U.S.C. § 9607 (Supp. 1990).

[315] 42 U.S.C. § 9604(a)(1) (Supp. 1990).

[316] 55 Fed. Reg. 8847 (1990) (to be codified at 40 C.F.R. § 300.430(d)(1)).

[317] 55 Fed. Reg. 8847 (1990) (to be codified at 40 C.F.R. § 300.430(d)(2)).

[318] 55 Fed. Reg. 8848 (1990) (to be codified at 40 C.F.R. § 300.430(e)(1)).

[319] 55 Fed. Reg. 8849 (1990) (to be codified at 40 C.F.R. § 300.430(e)(9)(iii)).

[320] *Id.* ARARs are "applicable" or "relevant and appropriate requirements of other federal and state environmental and public health laws." 55 Fed. Reg. 8848 (1990) (to be codified at 40 C.F.R. § 300.430(e)(9)(iii)(B)); *see* 55 Fed. Reg. 8814, 8817 (1990) (to be codified at 40 C.F.R. § 300.5)(definitions "applicable requirements" and "relevant and appropriate requirements"). In general, the CERCLA remedy selected should be at least as stringent as other applicable federal and state laws. 42 U.S.C. § 9621(d) (Supp. 1986). Therefore, the most strict standard, requirement, criteria, or limitation existing in either federal or state environmental law should be attained in the CERCLA remedy. *Id.* ARARs and other factors, including cancer risk factors and Maximum Contaminant Level Goal's (MCLGs) established under the Safe Drinking Water Act, are utilized to establish acceptable hazardous substance exposure levels that are protective of human health and the environment. 55 Fed. Reg. 8848 (1990) (to be codified at 40 C.F.R. § 300.430(e)(2)(i)). For carcinogen concentration levels an excess upper-bound lifetime cancer risk to an individual of between 10^{-4} and 10^{-6} is deemed to be acceptable exposure levels. *Id.*

(3) Long-term effectiveness and permanence,[321]

(4) Reduction at toxicity, mobility or volume through treatment,[322]

(5) Short-term effectiveness,

(6) Implementability,

(7) State acceptance,

(8) Cost, and

(9) Community acceptance.[323]

Since RI/FSs have become such a major project, the EPA requires a "work plan" to precede the RI/FS.[324] The work plan sets forth in detail such things as the proposed type of ground water and soil sampling (number and parameters to be tested), the location and depths of monitoring wells, the timing for accomplishing certain tasks, and generally the degree to which the site will be studied and how alternatives will be developed.[325]

C. Record of Decision (ROD)

Once the RI/FS has presented the EPA with the detailed discussion of several cleanup options, the EPA must select the appropriate option in light of the nine regulatory requirements previously mentioned.[326] The EPA then prepares a Record of Decision (ROD) which sets forth the remedial action alternatives available and the process of selection.[327] An administrative record is established, which contains the documents that form the basis for the selection of a response action.[328] Once the proposed

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[321] 55 Fed. Reg. 8849 (1990) (to be codified at 40 C.F.R. § 300.430(e)(9)(iii)(C)). SARA includes a strong preference for "permanent" destruction or treatment-based remedies for determining "how clean is clean"; off-site transport and land redisposal is the *least* favored approach. SARA § 121(b), 42 U.S.C. § 9621(b) (Supp. 1986).

[322] 55 Fed. Reg. 8849 (1990) (to be codified at 40 C.F.R. § 300.430(e)(9)(iii)(D)). Section 121(b) essentially provides in paragraph (2) that a technology may be "available" even if it has never been used before. In deciding whether to require such an unproven technology, the EPA may take into account the technology's "degree of support" by parties "interested in the site." SARA § 121(b), 42 U.S.C. § 9621(b) (Supp. 1990). The EPA must publish an explanation if the selected remedy does not meet preferred criteria. *Id.*

[323] 55 Fed. Reg. 8849-8850 (1990) (to be codified at 40 C.F.R. § 300.430(2)(9)(iii)).

[324] 55 Fed. Reg. 8846 (1990) (to be codified at 40 C.F.R. § 300.430(2)(b)).

[325] *Id.*

[326] *See supra* notes 317-21 and accompanying text.

[327] 55 Fed. Reg. 8850-8851 (1990) (to be codified at 40 C.F.R. § 300.430(f)(1), (4)).

[328] 55 Fed. Reg. 8859-8861 (1990) (to be codified at 40 C.F.R.§ § 300.800-.825 Subpt.

plan has been established, the EPA must provide an opportunity for written comments and for an informal public meeting regarding the ROD.[329] The EPA must also assure state involvement in the ROD process.[330] After the final ROD is signed, it is again published and made available for public inspection and duplication.[331]

D. Remedial Design and Remedial Activity (RD/RA)

At the ROD stage, the remedial alternative which the EPA selects will be presented in fairly basic and conceptual terms and the costs will only be estimates. A "design" stage is necessary to develop detailed engineering plans, site specifications, and all other site factors that are necessary to permit the actual remedial action to take place. This remedial design (RD) must be in conformity with the remedy selected and set forth in the ROD.[332] The RD usually takes nine to twelve months to prepare and can cost in the millions of dollars and once the RD is complete, a construction contract may be awarded for the actual remedial action (RA).[333] In addition, there is often a long term "operation and maintenance" (O & M) phase[334] after the completion of the RA.[335] The RD/RA activities may be conducted by the EPA or by PRPs pursuant to a consent decree entered into

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[329] 55 Fed. Reg. 8851 (1990) (to be codified at 40 C.F.R. § 300.430(f)(2)); *see* CERCLA § 117(a)-(d) (Supp. 1990), 42 U.S.C. § 9617(a)-(d) (SARA amended CERCLA to add "public participation" requirements regarding development of ROD). Additionally, EPA can give "super grants" up to $50,000 to anyone to "facilitate" public participation. CERCLA § 117(e)(2), 42 U.S.C. § 9617(e) (Supp. 1990).

[330] CERCLA § 121(f), 42 U.S.C. § 9621(f) (Supp. 1990); *see* 55 Fed. Reg. 8850 (1990), (to be codified at 40 C.F.R. § 300.430(f)(1)) (requiring initial comments on ROD by "support agency," which is usually state agency, with EPA "being lead agency.").

[331] 55 Fed. Reg. 8850 (1990) (to be codified at 40 C.F.R. § 300.430(f)(5)).

[332] 55 Fed. Reg. 8852 (1990) (to be codified at 40 C.F.R. § 300.435(a), (b); *see* 40 C.F.R. § 300.5, 55 Fed. Reg. 8817 (for definition of remedial design).

[333] 55 Fed. Reg. 8852 (1990) (to be codified at 40 C.F.R. § 300.435(a) and (b)).

[334] 55 Fed. Reg. 8853 (1990) (to be codified at 40 C.F.R. § 300.435(f)). O & M is defined in 40 C.F.R. § 300.5 as "activities required to maintain the effectiveness of response actions." 55 Fed. Reg. 8817 (1990). This usually entails long term monitoring of ground water and other exposure pathways by monitoring wells and other means. *Id.*

[335] 55 Fed. Reg. 8853 (1990) (to be codified at 40 C.F.R. § 300.435(f)).

between the EPA and the PRPs.[336]

The EPA is required to review the RA every five years after its initiation to "assure that human health and the environment are being protected."[337] The EPA may take "additional" RA if, in its judgment after the review, such action is "appropriate."[338] After a five-year review, a NPL site may be "delisted" (removed from the NPL), when no further action is determined to be appropriate and when there is state concurrence after public comment.[339]

III. Liability Provisions of CERCLA

A. Scope of Liability

CERCLA makes four categories of parties, described as "potentially responsible parties" (PRPs), liable for certain costs and damages arising from releases or threatened releases of hazardous substances:[340]

(1) Current owners and operators[341] of the facility[342] (including, in the case of abandonment, the owner and operator immediately prior to abandonment);

(2) Facility owners and operators at the time of disposal of the hazardous substances at the facility;

(3) Any party who arranges for disposal or treatment of a hazardous substance of another party's facility, usually consid-

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[336] CERCLA § 104(a)(1), 42 U.S.C. § 9604(a)(1) (Supp. 1990).

[337] CERCLA § 121(c), 42 U.S.C. § 9621(c) (Supp. 1990).

[338] *Id.*

[339] 55 Fed. Reg. 8845-8846 (1990) (to be codified at 40 C.F.R. § 300.425(e)). Section 121(c) of SARA requires the following whenever the remedy will result in "any hazardous substances, pollutants, or contaminants remaining at the site": (1) EPA must review the site at least each five years to assure that health and the environment are still being protected; (2) EPA must take additional action at such sites any time in the future when warranted; and (3) EPA must report to Congress on all such sites and the results of all reviews and/or actions. CERCLA § 121(c), 42 U.S.C. § 9621(c) (Supp. 1990).

[340] CERCLA § 107(a), 42 U.S.C. § 9607(a) (Supp. 1990).

[341] *Id.*; *see* CERCLA § 101(20), 42 U.S.C. § 9601(20) (Supp. 1990) (defining "owner or operator," but excluding those who merely hold security interest with no participation in managing of facility as well as state and local governments).

[342] CERCLA § 107(a), 42 U.S.C. § 9607(a) (Supp. 1990). A "facility" is broadly defined to include any site or area where hazardous substance has come to be located. CERCLA § 101(a), 42 U.S.C. § 9601(9) (Supp. 1990).

ered to be synonymous with "generators"; and

(4) Any party who accepts a hazardous substance for transport to a disposal or treatment facility selected by that party.[343]

Each of these parties is liable for three primary types of costs and damages:[344] the cost of removal or remedial action, any response costs incurred by others, and damages to natural resources owned or controlled by any government.[345]
CERCLA does not, however, establish a private cause of action for any persons who seek personal injury or punitive damages.[346]

It is clear both from the legislative history and statutory language that CERCLA carries a strict liability standard.[347] Liability is retroactive because parties are liable for acts or omissions occurring well before the date of CERCLA's enactment in 1980.[348] Reported decisions have consistently held that joint and several liability may be imposed in appropriate circumstances.[349] Sovereign immunity affords no protection against this strict, retroactive, and joint and several liability.[350] At least one court has held that liability can be easily established by proof that (1) the defendant's hazardous substances were shipped to a site; (2) the substance or similar substance was found at the site; (3) there was a release into the environment; and (4) the release resulted in the response costs.[351]

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[343] CERCLA § 107(a), 42 U.S.C. § 9607(a) (Supp. 1990).

[344] *Id.* Liability also exists for the "cost of any health assessment or health effects study carried out." *Id.*

[345] *See* CERCLA § 101(16), 42 U.S.C. § 9601(16) (Supp. 1990) (definition of natural resources); CERCLA § 107(a), 42 U.S.C. § 9607(a) (Supp. 1990) (definition of response).

[346] An attempt to insert a private cause of action provision of CERCLA was defeated in Congress. SUPERFUND, *supra* note 273, at 10.

[347] *See, e.g.*, Tanglewood East Homeowners v. Charles-Thomas, Inc., 849 F.2d 1568, 1572 (5th Cir. 1988) (CERCLA intended to impose strict liability on responsible parties).

[348] *See, e.g.*, United States v. Northeastern Pharmaceutical & Chem. Co., 810 F.2d 726, 737 (8th Cir. 1986) (insurer liable for cleanup costs incurred in 1981-82, although damage occurred in 1971-73), *modified* Continental Ins. Cos. v. Northeastern Pharmaceutical & Chem. Co., 842 F.2d 977 (8th Cir. 1988).

[349] *See, e.g.*, United States v. Northeastern Pharmaceutical & Chem. Co., 842 F.2d 977, 980 (8th Cir. 1988) (court held companies found dumping hazardous wastes at one site jointly and severally liable for cleanup costs).

[350] Pennsylvania v. Union Gas Co., 109 S. Ct. 2273, 2286 (1989).

[351] United States v. South Carolina Recycling & Disposal, Inc., 653 F. Supp. 984, 992 (D.S.C. 1984). The court also found that CERCLA estabished a rebuttable causal presumption that the presence of hazardous waste leads to hazardous and threatening con-

Section 113(f)(1) of CERCLA[352] creates express rights of contribution among PRP's and any party who resolves its liability with the EPA.[353] Contribution actions are to be governed by federal law, and the courts are free to allocate response costs among liable parties using factors they deem appropriate.[354] Liability for each release is limited to the cost of the response action plus $50 million for any damages to natural resources, except where the release was willful, caused by a violation of regulations, or where the party did not cooperate.[355] Punitive damages in an amount of three times the Superfund-financed clean-up costs incurred as a result of the failure to comply with a removal or remediation order may be assessed by the EPA.[356]

B. Defenses to Liability

The only defenses authorized by CERCLA are acts of God, acts of war, and acts of third parties.[357] The third party defense provides an opportunity for a PRP to avoid liability if it can prove three elements "by a preponderance of the evidence." First, the release or threat of release and the resulting damages must be caused solely by the act or omission of the third party who is not the defendant's agent, employee, or a person with whom the defendant has a "contractual relationship." Second, the defendant must offer proof that it exercised "due care" with respect to the hazardous substance. Finally, the defense is complete if the defendant took adequate precautionary measures against the foreseeable acts and omissions of the third party.[358]

The SARA amendments added a definition of "contractual relationships" which, in essence, created an "innocent purchaser" defense as part of the third party defense.[359] It will be

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ditions. *Id.* at 998 n.11. The court held that because such a causal presumption was rational and not arbitrary, that due process was not offended. *Id.*

[352] 42 U.S.C. § 9613(f)(1) (Supp. 1990).

[353] CERCLA § 113(f)(3)(C), 42 U.S.C. § 9613(f)(3)(C) (Supp. 1990).

[354] *Id.*

[355] CERCLA § 107(c), 42 U.S.C. § 9607(c) (Supp. 1990).

[356] CERCLA § 107(c)(3), 42 U.S.C. § 9607(c)(3) (1982).

[357] *Id.* § 9607(b) (1982).

[358] *Id.* § 9607(b)(3) (1982).

[359] CERCLA § 101(35), 42 U.S.C. § 9601(35) (Supp. 1990).

recalled that if the defendant has a "contractual relationship" with the third party, the third party defense is unavailable.[360] "Contractual relationship" is defined in SARA to include land contracts,, deeds or other instruments transferring title or possession from one site-owner to another.[361] These instruments will be considered "contractual relationships" and will therefore make the third-party defense inapplicable unless the defendant can prove that he acquired the facility property after the disposal of the hazardous substances at the facility and that he "did not know or had no reason to know" that hazardous substances were present at the site.[362] Alternatively, the defendant may escape liability by showing that he acquired the facility by inheritance or bequest.[363] Furthermore, if the defendant is a government entity, it may show that it acquired the facility by escheat, through an involuntary transfer, or through the exercise of eminent domain by purchase or condemnation.[364]

State or local governments who are present landowners of CERCLA sites may avoid liability if the government acquired ownership or control of the site "involuntarily through bankruptcy, tax delinquency, abandonment, or other circumstances in which the government involuntarily acquires title by virtue of its function is sovereign," unless the government has "caused or contributed to release or threatened release of a hazardous substance from the facility."[365]

IV. Government Settlements

The EPA has discretion to utilize settlement procedures regarding the conduct and financing of CERCLA response actions.[366] The EPA decision not to enter into an agreement or settlement is not subject to judicial review, but the EPA must

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[360] CERCLA § 107(b)(3), 42 U.S.C. § 9607(b)(3) (1982).

[361] CERCLA § 101(35)(A), 42 U.S.C. § 9601(35)(A) (Supp. 1990).

[362] *Id.* § 9601(35)(A)(i).

[363] *Id.* § 9601(35)(A)(iii).

[364] *Id.* § 9601(35)(A)(ii).

[365] CERCLA § 101(20)(D), 42 U.S.C. § 9601(20)(D) (Supp. 1990) (excluding such state and local governments from definition of "owner or operator" as used in CERCLA § 107(a)(1), (2), 42 U.S.C. § 9607(a)(1), (2) (1982)).

[366] CERCLA § 122(a), 42 U.S.C. § 9622(a) (Supp. 1990).

explain its position in writing to the PRPs.[367] Should the EPA decide to seek settlement, all PRPs must be encouraged to participate.[368] CERCLA provides for a moratorium on the initiation of a RI/FS for sixty days from the date that special notice letters sent to the PRPs. This stay in the proceeding is established to allow the PRPs to make a "good faith" proposal to finance the RI/FS.[369] If a good faith proposal is made, then the EPA and the PRPs will proceed to consummate the agreement within ninety days after the date of the special notice letters.[370] Agreements can be embodied in an administrative consent order or a judicial consent decree.[371]

If no good faith proposal is made within the time period, then the EPA can initiate the RI/FS after an additional thirty days, which constitutes a total of ninety days after the date of the special notice letters.[372] The EPA can also enter into a unilateral administrative order directing the PRP's to perform the RI/FS if an "imminent and substantial endangerment to the public health or the environment" exists.[373] Violation of such an order after it becomes effective can subject a PRP to treble damages, as well as civil penalties of up to $25,000 per day.[374]

For CERCLA remedial actions, a moratorium is established on the initiation of a RI/FS or an enforcement action for sixty days from the date that the special notice letters are sent to the PRPs.[375] If a good faith proposal is made, the EPA and the PRPs will proceed to consummate a settlement agreement within 120 days after the date of the special notice letters.[376] Agreements to undertake or finance section 106 remedial actions

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[367] *Id.*

[368] *Id.* § 122(e)(1), 42 U.S.C. § 9622(e)(1).

[369] *Id.* § 122(e)(2)(B), 42 U.S.C. 9622(e)(2)(B).

[370] *Id.* § 122(e)(2)(A), 42 U.S.C. § 9622(e)(2)(A). *See id.* § 122(d)(3), 42 U.S.C. § 9622(d)(3) (President shall issue order or decree setting forth obligations of party with whom cleanup agreement has been made).

[371] *Id.* § 122(d)(3), 42 U.S.C. § 9622(d)(3).

[372] *Id.* § 122(e)(4), 42 U.S.C. § 9622(e)(4).

[373] *Id.* § 106(a)(1), 42 U.S.C. § 9606(a)(1).

[374] CERCLA §§ 106(b)(1), 107(c)(3), 42 U.S.C. §§ 9606(b)(1), 9607(c)(3) (1982 & Supp. 1990).

[375] CERCLA § 122(e)(2)(B), 42 U.S.C. § 9622(e)(2)(B) (Supp. 1990).

[376] *Id.* § 122(e)(2)(A), 42 U.S.C. § 9622(e)(2)(A).

can only be in the form of a judicial consent decree.[377]

If no good faith proposal is made within the time period, then the EPA can initiate remedial action after an additional sixty days, constituting a total of 120 days after the date of the special notice letters.[378] The EPA may enter a unilateral administrative order directing the PRPs to perform the RD/RA if an imminent and substantial endangerment exists.[379] Violation of such an order after it becomes effective can subject a PRP to treble damages as well as civil penalties up to $25,000 per day.[380]

When the EPA and a PRP enter into a settlement agreement, that PRP's liability to the United States is limited to the terms of the agreement.[381] CERCLA expressly authorizes the issuance of covenants not to sue in the discretion of the EPA.[382] The covenants not to sue may cover future liability as well as past liability to the United States, limited to the extent expressed in the settlement agreement.[383] "De minimis" settlements with slightly responsible defendants are encouraged at early stages in the proceeding.[384] De minimis settlements are authorized primarily if the amount and hazardous effects of the hazardous substances contributed to the site by the settling party are minimal in comparison to those contributed by other parties.[385] Cost recovery settlements that total over $500,000 require the prior written approval of the Attorney General and can be enforced by the federal district court in the district where the

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[377] *Id.* § 122(d)(1)(A), 42 U.S.C. § 9622(d)(1)(A).

[378] *Id.* § 122(e)(4), 42 U.S.C. § 9622(e)(4).

[379] CERCLA § 106(a)(1), 42 U.S.C. § 9606(a)(1) (1982).

[380] CERCLA §§ 106(b)(1), 107(c)(3), 42 U.S.C. §§ 9606(b)(1), 9607(c)(3) (1982 & Supp. 1986).

[381] CERCLA § 122(c)(1), 42 U.S.C. § 9622(c)(1) (Supp. 1990).

[382] *Id.* § 122(f)(1), 42 U.S.C. § 9622(f)(1).

[383] *Id.* § 122(c)(1), 42 U.S.C. § 9622(c)(1) (Supp. 1990). "Special" covenants not to sue, which mandatorily cover all future liability to the United States, are authorized under CERCLA if, in the judgment of the EPA, treatment of hazardous substances is effective to "destroy, eliminate or permanently immobilize the hazardous constituents of such substances" so that the substances and all byproducts "no longer present any current or currently foreseeable future significant risk to public health, welfare or the environment." *Id.* § 122(f)(2), 42 U.S.C. § 9622(f)(2).

[384] *Id.* § 122(g), 42 U.S.C. § 9622(g).

[385] *Id.*

release occurred.[386]

V. Reporting Requirements

Any person in charge of a facility must, as soon as he has knowledge of any release of a hazardous substance in a reportable quantity, notify the National Response Center.[387] "Federally permitted releases,"[388] releases reported under Subtitle C of RCRA, and releases which have been reported long enough to establish their "continuity, quantity and regularity" are exempted from CERCLA reporting requirements.[389] Unless superseded by EPA regulations, the reportable quantity for any hazardous substance is one pound, except where a higher reportable quantity has been established pursuant to the Clean Water Act.[390] Immediate notification to the National Response Center is required when a release of a hazardous substance equals or exceeds the reportable quantity in any twenty-four hour period.[391] The regulations also identify certain releases that do not need to be reported or that must be reported only under certain circumstances.[392] A list of hazardous substances and their reportable quantities is located in a table of 40 C.F.R. § 302.4.

VI. Enforcement

CERCLA contains a number of provisions providing civil and criminal sanctions for CERCLA violations. CERCLA's section 109 provides for "Class I" and "Class II" civil penalties for violations of certain CERCLA provisions.[393] The EPA may as-

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[386] *Id.* § 122(g)(4), 42 U.S.C. § 9622(g)(4). If the Attorney General or his designee, which is the Department of Justice, has not approved or disapproved the order within 30 days after referral from the EPA, the order will be deemed approved unless the Attorney General and the EPA have agreed to extend the time. *Id.*

[387] *Id.* § 103(a), 42 U.S.C. 9603(a). The National Response Center, located in Washington, D.C., may be notified by telephone at (800) 424-8802 and (202) 426-2675. 40 C.F.R. § 302.6(a) (1989).

[388] *See* 42 U.S.C. § 9601(10) (Supp. 1990) (defining "federally permitted releases").

[389] CERCLA § 103(b)(3), 42 U.S.C. § 9603(b)(3) (Supp. 1990); *Id.* § 103(f), 42 U.S.C. § 9603(f).

[390] *Id.* § 102(b), 42 U.S.C. § 9602(b).

[391] 40 C.F.R. § 302.6(a) (1989).

[392] *Id.* § 302.6(b).

[393] CERCLA § 109(a)-(b), 42 U.S.C. § 9609(a)-(b) (Supp. 1990). The subject matter

sess Class I civil penalties up to a maximum of $25,000 for each violation and may assess Class II civil penalties up to $25,000 for each day a violation continues.[394] Subsequent Class II violations may result in civil penalties up to $75,000 per day if the violation continues.[395]

Any person who fails to immediately notify the National Response Center of a release required to be reported under CERCLA § 103 or who knowingly submits false or misleading information to the NRC can be fined an amount provided for in Title 18 of the United States Code or receive up to three years' imprisonment or both.[396] Anyone who knowingly fails to provide notice required by § 103 will not be entitled to the limitations of liability or the defenses set forth in CERCLA § 107.[397]

If there is or may be an "imminent and substantial endangerment" to the "public health or welfare or the environment," the EPA may require PRP's to take cleanup actions.[398] The EPA may issue an administrative or judicial order,[399] and willful failure to comply with such a CERCLA order or decree may result in civil penalties of up to $25,000 per day.[400]

Any person who is liable for a hazardous substance release or threat of release who fails "without sufficient cause" to com-

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of the violations for which Class I and Class II penalties are assessed are the same for both classes: (1) CERCLA § 103(a)-(b), 42 U.S.C. § 9603(a)-(b) (1982) (release notification); (2) CERCLA § 103(d)(2), 42 U.S.C. § 9603(d)(2) (Supp. 1990) (destruction of records); (3) CERCLA § 108, 42 U.S.C. 9608 (Supp. 1990) (financial responsibility); (4) CERCLA § 122(d)(3), 42 U.S.C. § 9622(d)(3) (Supp. 1990) (CERCLA § 104(b) (settlement agreement orders for § 104(b) RI/FS's); and (5) CERCLA § 122(l), 42 U.S.C. § 9622 (1982) (violation of CERCLA § 120 orders, consent decrees and agreements regarding response actions at federal facilities). 42 U.S.C. § 9609(a)-(b) (Supp. 1990); *see also, id.* § 109(c), 42 U.S.C. § 9609(c) (providing EPA authority to bring action in district court for penalties up to $25,000 per day per violation for violation of CERCLA provisions discussed above).

[394] CERCLA § 109(a)-(b), 42 U.S.C. § 9609(a)-(b) (Supp. 1990).

[395] *Id.* § 109(b), 42 U.S.C. § 9609(b); *see also id.* § 109(c), 42 U.S.C. § 9609(c) (providing for authority of EPA to bring actions in district court to obtain penalties up to $75,000 for subsequent violations).

[396] *Id.* § 103(b)(3), 42 U.S.C. § 9603(b)(3).

[397] CERCLA § 103(c), 42 U.S.C. § 9603(c) (1982).

[398] *See, e.g.*, RCRA § 7003, 42 U.S.C. § 6973 (1982 & Supp. 1990) (imminent hazard actions); CERCLA § 106(a), 42 U.S.C. § 9606(a) (1982) (abatement actions).

[399] 42 U.S.C. § 6973 (1982 & Supp. 1990).

[400] *Id.* § 106(b)(1), 42 U.S.C. § 9606(b)(1) (Supp. 1990).

ply with a remediation or removal action order may be liable for punitive damages in an amount up to three times the amount of the cleanup costs paid from the Superfund.[401] The EPA may commence a civil action to recover the punitive damages.[402]

THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT (EPCRA)

On December 4, 1984, a cloud of methyl isocyanate, a toxic gas, escaped from a Union Carbide chemical plant in Bhopal, India, killing over 2,500 persons and injuring tens of thousands more.[403] A chemical release from a sister Union Carbide plant in Institute, West Virginia, shortly after the Bhopal tragedy, though not nearly as serious as Bhopal, made the problem even more apparent. The Bhopal and West Virginia incidents began a chain reaction that led to passage by Congress in 1986[404] of the Emergency Planning and Community Right-to-Know Act (EPCRA) as an independent section of the Superfund Amendments and Reauthorization Act (SARA).[405]

EPCRA contains three major subtitles. Subtitle A has two components: planning for chemical emergencies[406] and emergency notification of chemical accidents and releases.[407] Subtitle B provides for the reporting of hazardous chemical inventories[408] and toxic chemical release reporting.[409] Finally, Subtitle C contains general requirements concerning trade secrets, disclosure of information to health professionals, public access to information, enforcement, civil actions, and other topics.[410]

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[401] CERCLA § 107(c)(3), 42 U.S.C. § 9607(c)(3) (1982).

[402] *Id.*

[403] U.S. Environmental Protection Agency, Chemicals in Your Community: A Guide to the Emergency Planning and Community Right-to-Know Act, No. 516-002/80246 (Sept. 1988), at 2.

[404] 42 U.S.C. §§ 11001-11050 (Supp. 1990).

[405] SARA §§ 301-303, 305, 42 U.S.C. §§ 11001-11003, 11005 (Supp. 1990).

[406] *Id.* § 304, 42 U.S.C. § 11004.

[407] *Id.* §§ 311-312, 42 U.S.C. §§ 11021-11022.

[408] *Id.* § 313, 42 U.S.C. § 11023.

[409] *Id.* §§ 321-324, 42 U.S.C. §§ 11041-11044.

[410] *Id.* § 301(a), 42 U.S.C. § 11011(a).

I. Subtitle A—Emergency Planning and Emergency Release Notification

A. Emergency Planning—EPCRA §§ 301-303 and 305

The emergency planning section of EPCRA is designed to help communities prepare for and respond to emergencies involving hazardous substances. As of April 17, 1987, the governor of each state was required to appoint a State Emergency Response Commission (SERC). In this state, the Mississippi Emergency Management Agency (MEMA), operating as the Mississippi Emergency Response Commission was designated as the SERC by Governor Bill Allain on March 3, 1987.[411]

Each SERC in turn has divided its state into local emergency planning districts, and must appoint a Local Emergency Planning Committee (LEPC) for each district.[412] In Mississippi, these LEPCs are organized primarily on a county basis under authorization of the Mississippi Emergency Management Law.[413] LEPCs are required to include representatives from various local groups including elected and law enforcement officials, civil defense workers, health personnel, community groups, the news media, and industry.[414]

Under authorization of the Mississippi Emergency Management Law and Executive Order No. 573, the Mississippi Emergency Response Commission promulgated Regulation MERC-1.[415] The stated intent of the regulation is to apply the EPCRA statutes and regulations to effectuate state and local emergency response and community right-to-know systems.[416] The purpose is, first, to protect the local community and environment from any hazardous substance release and, second, to enhance public

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[411] Executive Order No. 573 (March 3, 1987); *see* Mississippi Emergency Response Comm'n, Regulation MERC-1, Emergency Planning & Community Right-to-Know (August 26, 1987), at 1-3.

[412] SARA § 301(a), (c), 42 U.S.C. § 11001(a), (c) (Supp. 1990).

[413] Mississippi Emergency Management Law, Miss. Code Ann. § 33-15-1 to -49 (Supp. 1989).

[414] SARA § 301(c), 42 U.S.C. § 11001(c) (Supp. 1986).

[415] Mississippi Emergency Response Comm'n Regulation, MERC-1, Emergency Planning and Community Right-to-Know (August 26, 1987) [hereinafter Regulation MERC-1].

[416] *Id.* at 1.

awareness of the existence, nature, and location of hazardous substances in the community.[417]

EPCRA mandated that each LEPC prepare an emergency response plan by October 17, 1988, which must include potential local hazards, response capabilities, and procedures to follow in an emergency.[418] The plan is based on information submitted to the LEPC concerning "extremely hazardous substances" which have been identified in a list by the EPA as having immediate health effects and hazardous properties.[419] The list of extremely hazardous substances includes a "threshold planning quantity" for each substance.[420] If this amount or more of the chemical is present at any facility, the owner or operator of the facility must have notified the SERC and the LEPC by May 17, 1987, or within sixty days after the facility first becomes subject to reporting requirements, whichever is later.[421]

The facility's owner or operator must name a representative as "facility coordinator," who must participate in the local committee's planning process.[422] The owner or operator must also promptly inform the LEPC of any changes at the facility that may be relevant to emergency planning.[423] Additionally, upon the LEPC's request, the owner or operator must provide information necessary for the preparation or implementation of the Emergency Plan.[424] Facility owners or operators who violate these reporting provisions are subject to civil penalties of up to $25,000 a day for each day a violation continues.[425]

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[417] *Id.*

[418] SARA § 303(a), (c), 42 U.S.C. § 11003(a), (c) (Supp. 1990).

[418] *Id.*§ 302(a)(2), 42 U.S.C. § 11002(a)(2); *see* 40 C.F.R. § 355.20 apps. A, B (1989) (listing extremely hazardous substances).

[420] 40 C.F.R. § 355.20 apps. A, B (1989).

[421] SARA § 302(c), 42 U.S.C. § 11002(c) (Supp. 1990); *see also* 40 C.F.R. § 355.40(a)(2) (1989) (exempting releases solely within facility boundary, federally permitted releases, certain continuous releases, pesticide releases and radionuclide releases from notification requirements).

[422] SARA § 303(d)(1), 42 U.S.C. § 11003(d)(1) (Supp. 1990), 40 C.F.R. § 355.30(c) (1989).

[423] *Id.* § 303(d)(2), 42 U.S.C. § 11003(d)(2), 40 C.F.R. § 355.30(d) (1989).

[424] *Id.* § 303(d)(3), 42 U.S.C. § 11003(d)(3), 40 C.F.R. § 355.30(d)(2) (1989).

[425] *Id.* § 325(a), 42 U.S.C. § 11045(a).

B. Emergency Release Notification—EPCRA § 304

Generally EPCRA requires that a facility immediately notify the LEPC and the SERC of any release of more than a reportable quantity of the substance beyond the facility boundary.[426] The notice provisions of this section apply to both "extremely hazardous substances" under EPCRA[427] and "hazardous substances" under CERCLA.[428] Proper notice includes the type of chemical, amount, time, and duration of the release, medium into which the release occurred, any known health risks associated with the chemical, the precautions being taken, and the name of the contact.[429] Notice may be accomplished in person or by telephone to the proper authorities and, in the case of a release during transportation, by calling 911 or the operator if 911 does not exist.[430]

After initial verbal notification, written follow-up reporting is also required. As soon as practicable after the release, the facility coordinator must submit a written report to both the LEPC and the SERC.[431] The follow-up report must update the original notification and provide additional information on any response actions taken, known or anticipated health risks, and, if appropriate, advice regarding any medical care needed by exposure victims.[432]

Any person who fails to notify the authorities of a release or to submit a follow-up emergency report is subject to civil penalties of up to $25,000 a day for each day of non-compliance,[433]

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[426] *Id.* § 304(a), 42 U.S.C. § 11004(a).

[427] *See* 40 C.F.R. § 355 (1989) (listing "extremely hazardous substances" and responsible quantities).

[428] *See id.* § 302 (listing CERCLA "hazardous substances and reportable quantities"). For those substances under CERCLA purview, notification to the National Response Center immediately after the discovery of hazardous substance release greater than the reportable quantity is also required. Failure to make such notification can subject a facility owner to a fine, imprisonment up to three years, or both. CERCLA § 103(a), (b)(3), 42 U.S.C. § 9603(a), (b)(3) (1982 & Supp. 1986).

[429] SARA § 304(b)(2), 42 U.S.C. § 11004(b)(2) (Supp. 1990).

[430] *Id.* § 304(b)(1), 42 U.S.C. § 11004(b)(1).

[431] *Id.* § 304(c), 42 U.S.C. § 11004(c) (Supp. 1990).

[432] *Id.*

[433] *Id.* § 325(b)(1)-(2), 42 U.S.C. § 11045(b)(1)-(2).

while repeat offenders can be fined up to $75,000 a day.[434] In addition, criminal penalties may be imposed on any person who "knowingly and willfully" fails to provide notice. Criminal violators face fines of up to $25,000 or prison sentences of up to two years. Repeat criminal offenders face fines of up to $50,000 and imprisonment for as long as five years.[435]

II. Subtitle B—Hazardous Chemical Reporting and Toxic Chemical Reporting

A. Hazardous Chemical Reporting—EPCRA §§ 311 and 312

In addition to emergency release reporting of hazardous substances and extremely hazardous substances, certain facility owners and operators must report on the hazardous chemicals they use and store above "minimum threshold levels."[436] The reporting is based not on any list of specific chemicals, but on a definition of "hazardous chemical" under Occupational Health and Safety Administration (OSHA) regulations, which encompasses essentially any material that poses physical or health hazards.[437]

Reporting is required in two ways. The first is through either OSHA "material safety data sheets" (MSDSs), which contain information on each hazardous chemical's physical properties and health effects,[438] or, alternatively, a list of such chemicals grouped by hazard category rather than by chemical.[439] The MSDSs or a list of hazardous chemicals must be submitted to the LEPC, the SERC, and the local fire department.[440] The regulations establish the dates of submission and the mini-

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[434] *Id.* § 325(b)(2), 42 U.S.C. § 11045(b)(2).

[435] *Id.* § 325(b)(4), 42 U.S.C. § 11045(b)(4).

[436] *Id.* § 311-312, 42 U.S.C. § 11021-11022; 40 C.F.R. §§ 370.20-.28; *see* 40 C.F.R. § 370.20(b) (1989) (minimum threshold levels).

[437] 29 C.F.R. § 1910.1200(b)-(c) (1989).

[438] Only facilities required by OSHA regulations to prepare or have available MSDS's are required to comply with hazardous chemical reporting under sections 311 and 312 of EPCRA. SARA §§ 311(a)(1), 312(a)(1), 42 U.S.C. §§ 11021(a)(1), 11022(a)(1) (Supp. 1990).

[439] SARA § 311(a)(1)-(2), 42 U.S.C. § 11021(a)(1)-(2) (Supp. 1990).

[440] *Id.* § 311(a)(1), 42 U.S.C. § 11021(a)(1).

mum threshold levels.[441] Additionally, upon request of the LEPC, facility owners and operators who submitted lists may be required to submit MSDSs to the LEPC thirty days after receipt of a request.[442] Members of the public may obtain MSDSs by requesting them from the LEPC.[443]

The second way that facilities must report on hazardous chemicals is by submitting annual inventories of these same hazardous chemicals above minimum threshold levels to the same three organizations—the LEPC, the SERC, and the local fire department.[444] EPCRA includes a "two-tier" approach for annual inventory reporting. Under Tier I, a facility must report on a single Tier I form to the SERC, LEPC, and local fire department the maximum and average amounts present during the preceding year and general location of chemicals in certain hazard categories.[445] Tier II forms are chemical-specific and provide much more information than the Tier I form.[446] Facilities have been granted the flexibility to choose whether to file Tier I or Tier II forms.[447] Additionally, Tier II forms can be obtained from the facility owner or operator upon request by the SERC, the LEPC, or the local fire department.[448] The public and other state and local officials may obtain Tier II forms upon request from the SERC or LEPC.[449]

Violators of the hazardous chemical reporting provisions are subject to a variety of penalties. For failure to submit MSDSs or lists of MSDS chemicals, civil penalties of up to $10,000 a day for each violation may be assessed.[450] For non-compliance with the annual inventory requirements, the penalty is $25,000 per

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[441] 40 C.F.R. § 370.20(b) (1989).

[442] SARA § 311(c)(1), 42 U.S.C. § 11021(c)(1) (Supp. 1990).

[443] *Id.* § 311(c)(2), 42 U.S.C. § 11021(c)(2).

[444] *Id.* § 312, 42 U.S.C. § 11022.

[445] *Id.* § 312(d)(1), 42 U.S.C. § 11022(d)(1).

[446] *Id.* § 312(d)(2), 42 U.S.C. § 11022(d)(2). Tier II forms contain, in addition to the information in Tier I forms, the name of each chemical, the maximum and average amounts of each chemical, not just each category of chemical, and a description of the storage method. *Id.*

[447] 40 C.F.R. § 370.25(b) (1989). The Mississippi Emergency Response Commission, which is Mississippi's SERC, prefers the Tier II rather than the Tier I forms.

[448] SARA § 312(e)(1), 42 U.S.C. § 11022(e)(1) (Supp. 1990).

[448] *Id.* § 312(e)(2)-(3), 42 U.S.C. § 11022(e)(2)-(3).

[450] *Id.* § 325(c)(2), 42 U.S.C. § 11045(c)(2).

violation.[451] Each day that a violation of either of the above continues is deemed a separate violation.[452]

B. Toxic Chemical Release Reporting—EPCRA § 313

The last major element of EPCRA Subtitle B applies to certain facilities[453] with ten or more employees that manufacture, process, or otherwise use more than "threshold" amounts of the "toxic chemicals" specifically listed in the regulations.[454] The threshold amount of a toxic chemical at a facility is currently 25,000 pounds per year that is manufactured or processed at or imported to the facility.[455] The threshold amount of a toxic chemical that is "otherwise used" at a facility is currently 10,000 pounds per year.[456] Facility owners and operators must estimate each year the total amount of each toxic chemical that is released into the environment above the threshold amounts, either accidentally or as a result of routine plant operations, and the amount transported as waste to another location.[457]

Reports covering releases in the previous calendar year must be filed with the EPA and the SERC by July 1 of each year. Penalties for violation of toxic release inventory reporting requirements may reach up to $25,000 per day per violation.[458] The EPA is also required to compile and maintain a national computerized data base called the Toxic Release Inventory (TRI), based on the data submitted in the toxic release inventory reports.[459] This data base is accessible to the public through

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[451] *Id.* § 312(c)(1), 42 U.S.C. § 11045(c)(1).

[452] *Id.* § 312(c)(3), 42 U.S.C. § 11045(c)(3).

[453] The only facilities covered by this section are those industrial categories which have standard industrial classification codes of 20 through 39. *Id.* § 313(b), 42 U.S.C. § 11023(b). These codes are used to group categories of industry according to the type of manufacturing being done and the materials used. *Id.*

[454] *See* 40 C.F.R. § 372.65 (1989) (listing chemicals subject to EPCRA § 313 notice). Other hazardous chemicals may be added by the EPA upon certain showing of hazardous properties. SARA § 313(d), 42 U.S.C. § 11023(d) (Supp. 1990).

[455] SARA § 313(f)(1)(B)(iii), 42 U.S.C. § 11023(f)(1)(B)(iii) (Supp. 1990).

[456] *Id.*

[457] *Id.* § 313, 42 U.S.C. § 11023(g)(1). This information should be conveyed to the EPA on a Toxic Chemical Release Form R, which can be found at 40 C.F.R. § 372.85 (1989).

[458] *Id.* § 325(c)(1), (3), 42 U.S.C. § 11045(c)(1), (3).

[459] *Id.* § 313(j), 42 U.S.C. § 11023(j).

computer telecommunications and other means on a cost basis.[460] EPA published the first TRI on June 19, 1989.

Pursuant to the Mississippi Public Records Act[461] and SARA,[462] the Mississippi Emergency Response Commission promulgated Regulation MERC-2.[463] Regulation MERC-2 sets forth policies and procedures concerning the availability and disclosure of records held by the Mississippi Emergency Response Commission, including emergency response plans, material safety data sheets (MSDSs), inventory forms, toxic chemical release forms, and follow-up emergency notices.[464]

III. General Provisions

A. Trade Secrets

A facility owner or operator is authorized to withhold the specific chemical identity of the hazardous chemical, extremely hazardous substance, or toxic chemical if the requirements for a trade secret are satisfied.[465] In general, the owner operator must show that there has been no disclosure of the identity, that disclosure would adversely affect the owner's position in the market, and that the identity cannot be discovered through reverse engineering.[466] EPA regulations also set forth the means of asserting claims, review by the EPA of trade secret claims, and appeals from EPA decisions as well as other disclosure matters.[467] If the EPA determines that the trade secret claim is "frivolous," it may assess civil penalties of up to $25,000 per day per violation.[468] Criminal penalties up to $20,000 per day per violation or one year in prison or both may be assessed against

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[460] *Id.*

[461] Mississippi Public Records Act of 1983, Miss. Code Ann. §§ 25-61-1 to -17 (Supp. 1990).

[462] *See* SARA § 324, 42 U.S.C. § 11044 (Supp. 1990) (calling for public availability of plans, data sheets, forms and follow-up notices).

[463] Mississippi Emergency Response Commission, Regulation MERC-2 (Disclosure of Information) (Dec. 15, 1987).

[464] *Id.* at 1.

[465] SARA § 322(a), 42 U.S.C. § 11042(a) (Supp. 1990).

[466] *Id.* § 322(b), 42 U.S.C. § 11042(b).

[467] 40 C.F.R. §§ 350.5-.27 (1989).

[468] SARA § 325(d)(1), 42 U.S.C. § 11045(d)(1) (Supp. 1990).

any person who discloses information determined to be a trade secret under this section.[469]

B. Provision of Information to Health Professionals, Doctors and Nurses

An owner or operator of a facility may be required to report and disclose the specific chemical identity of the substance to any health professional who requests it if there is a written statement of need and a written confidentiality agreement.[470] In the event of a "medical emergency,"[471] the owner or operator must submit, upon request, MSDSs, Tier I or Tier II inventory forms, or toxic release Form R to the treating physician or nurse if the chemical identity is necessary to the first-aid, diagnosis or treatment and the patient has been exposed to the chemical.[472]

C. Citizen Suits

Any person may bring a suit against a facility owner or operator for failure to submit a follow-up emergency notice, an MSDS, a Tier I or Tier II form, or a toxic release Form R.[473] A state or local government may sue an owner or operator for failure to properly notify the SERC, for withholding of an MSDS, or for the failure to submit the requisite inventory form.[474] A SERC or LEPC may also sue an owner or operator for failure to submit emergency response information and Tier II documents.[475] These suits require sixty days notice to the EPA, the state, and the facility owner or operator.[476] No citizen suit may be commenced, however, if the EPA "has commenced and is diligently pursuing" an enforcement action regarding a violation that is the subject of the citizen suit.[477]

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[469] *Id.* § 325(d)(2), 42 U.S.C. § 11045(d)(2).

[470] *Id.* § 323(a), (c), 42 U.S.C. § 11043(a), (c).

[471] *See* 40 C.F.R. § 350.40(a) (1989) (defining medical emergency as situation requiring urgent and unscheduled medical attention).

[472] SARA § 323(b), 42 U.S.C. § 11043(b) (Supp. 1990).

[473] *Id.* § 326(a)(1)(A), 42 U.S.C. § 11046(a)(1)(A).

[474] *Id.* § 326(a)(2)(A), 42 U.S.C. § 11046(a)(2)(A).

[475] *Id.* § 326(a)(2)(B), 42 U.S.C. § 11046(a)(2)(B).

[476] *Id.* § 326(d), 42 U.S.C. § 11046(d).

[477] *Id.* § 326(e), 42 U.S.C. § 11046(e).

D. Exemption

Generally, EPCRA does not apply to the transportation, including the storage incident to transportation, of any hazardous substance or chemical.[478] A "transportation related release," to which EPCRA does not apply, is defined as "a release during transportation if the stored substance is moving under active shipping papers and has not reached the ultimate consignee."[479] It should be noted, however, that transporters of hazardous substances are still responsible for the emergency release notification section of EPCRA.[480]

OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA)

Pursuant to the authority of the Occupational Safety and Health Act,[481] the Occupational Safety and Health Administration (OSHA) has established a variety of regulations to provide for the protection of workers from chemical injury.

I. Hazard Communication Standard

The Hazard Communication Standard (HCS), often referred to as the Worker Right-to-Know Rule, has the broadest applicability. Implementation of this standard involves requirements for chemical manufacturers and employers at facilities using such materials. The Hazard Communication Standard defines a "hazardous chemical" to be any material representing a physical or health hazard to individuals.[482] This standard was initially applicable to facilities in the Standard Industrial Classification (SIC) codes 20-39,[483] but has now been extended to all employers.[484]

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[478] *Id.* § 304(d), 42 U.S.C. § 11004(d).

[479] 40 C.F.R. § 355.40(b)(4)(ii) (1989). These exempted transportation releases are covered and regulated under HMTA.

[480] SARA § 304(d), 42 U.S.C. § 11004(d) (Supp. 1990).

[481] OHSA, 29 U.S.C. §§ 651-678 (1982 & Supp. V 1987).

[482] 29 C.F.R. § 1910.1200(c) (1989). Excluded from this broad definition are food, drugs, cosmetics, wood products, tobacco or tobacco products, hazardous waste, and consumer articles used in the workplace. *Id.* § (b)(5).

[483] 48 Fed. Reg. 53,280 (1983); 50 Fed. Reg. 48,258 (1985); 51 Fed. Reg. 34,597 (1986).

[484] *Id.*

The principal instrument used to communicate hazards represented by each product is the Material Safety Data Sheet (MSDS).[485] The MSDS must include the chemical identities of materials present, their toxicities, the protective equipment necessary for safe use, and proper disposal procedures.[486] Chemical manufacturers and importers are required to develop or obtain an MSDS for each material they produce.[487] The MSDSs for all hazardous chemicals used in a working area must be kept readily available to employees on each shift while they are in their work area.[488]

Chemical manufacturers and importers are required to evaluate chemicals they produce or import to determine if these chemicals are hazardous.[489] Employers, however, are not required to conduct such a "hazard determination" for a chemical unless they choose not to rely on the evaluation performed by the manufacturer or importer.[490] Hazard determinations are to be based on available scientific evidence concerning the chemical, including mandatory and optional guidance provided by OSHA.[491]

Manufacturers are allowed to withhold certain chemical information if it can be demonstrated such information is a trade secret.[492] In order to support a trade secret contention, the documentation must include an MSDS provision stating that the specific chemical identity of a constituent is being withheld as a trade secret, disclosure of the hazardous properties and effects of the material has been made, and proof that the specific chemical information is available to health professionals.[493]

Facilities covered under the HCS are required to inventory hazardous chemicals used on site.[494] Workers for which exposure to hazardous chemicals can be expected must be informed of

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[485] 29 C.F.R. § 1910.1200(g) (1989).
[486] *Id.* § 1910.1200 (g)(2)(i)-(xii).
[487] *Id.* § 1910.1200 (g)(1), (g)(6), (j)(1).
[488] *Id.* § 1910.1200(g)(9).
[489] 49 C.F.R. § 1910.1200(d)(1) (1989).
[490] *Id.*
[491] 29 C.F.R. § 1900.1200(d) apps. A-C (1989).
[492] *Id.* § 1910.1200(i).
[493] *Id.* § 1910.1200(i)(1).
[494] *Id.* § 1910.1200(e)(1)(i).

and trained for the risks associated with exposure to those materials.[495] All containers of hazardous chemicals must be labeled, tagged, or marked to indicate the identity of contents and appropriate hazard warnings. Furthermore, the name displayed on the exterior of the container must be identical to the name on the corresponding MSDS.[496]

The HCS is a performance-oriented standard. Employers are required to develop a written program to detail how container labeling, maintenance of MSDSs, and employee training will be accomplished.[497] The program must include an inventory of hazardous chemicals used, the methods used to train employees for non-standard tasks, and the methods used to inform any contractor with employees working on-site of the hazardous chemicals they may encounter.[498]

II. OSHA Hazardous Waste Worker Standard

As required by the Superfund Amendments and Reauthorization Act of 1986 (SARA), OSHA promulgated a safety and training standard for hazardous waste workers.[499] This standard is applicable to the cleanup of uncontrolled hazardous waste sites and the emergency response to incidents with the potential for release of hazardous substances.[500]

Employers are required to develop a written health and safety program reflecting organizational structure and chain-of-command. A site safety program must also be developed.[501] Hazardous waste sites must be screened and risk identified prior to beginning work.[502] Personal protective equipment must be provided which has been selected on the basis of both pre-work screening and continuous site monitoring.[503] A combination of work practices, engineering controls, and personal protective

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[495] *Id.* § 1910.1200(h).
[496] *Id.* § 1910.1200(f).
[497] *Id.* § 1910.1200(e).
[498] *Id.* § 1910.1200(h).
[499] *Id.* § 1910.120.
[500] *Id.* § 1910.120(a)(1).
[501] *Id.* § 1910.120(b).
[502] *Id.* § 1910.120(c).
[503] *Id.* § 1910.120(c)(5).

equipment must be used to protect workers from exposure to hazardous substances.[504]

Workers must receive training from competent instructors prior to being involved in any of the work activities covered by this standard.[505] Employees must have at least eight hours of annual refresher training.[506] The majority of workers must be included in a medical surveillance program, even those individuals who do not wear respirators.[507] This standard also has specific conditions which must be met for the proper handling of drums and containers of a variety of hazardous substances.[508] There are, likewise, requirements for decontamination areas,[509] site illumination,[510] and personal hygiene facilities.[511]

III. Asbestos Regulations

Standards for protection of workers in specific occupations from exposure to asbestos dust have also been promulgated by OSHA.[512] Three respiratory protection levels have been established: Permissible Exposure Level (PEL); Excursion Level (EL); and Action Level (AL).[513] If workers are exposed to greater than the PEL or the EL, they must be included in a respiratory protection program which will include the use of respirators.[514] If workers are exposed to greater than the AL but less than the PEL or EL, they must be included in a medical monitoring program, but they are not required to wear respirators.[515]

Facilities with work areas where airborne concentrations of asbestos may exceed the PEL are required to establish regulated

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[504] *Id.* § 1910.120(d).
[505] *Id.* § 1910.120(e).
[506] *Id.* § 1910.120(e)(8).
[507] *Id.* § 1910.120(f).
[508] *Id.* § 1910.120(j).
[509] *Id.* § 1910.120(k).
[510] *Id.* § 1910.120(m).
[511] *Id.* § 1910.120(n).
[512] *Id.* §§ 1910.1001, .1101, 1926.58.
[513] *Id.* § 1910.1001(b), (c).
[514] *Id.* § 1910.1001(c), (g)(3).
[515] *Id.* § 1910.1001(l)(1).

areas which have been clearly demarcated.[516] Access to these areas must be restricted to prevent exposure to workers outside the area and each regulated area must be posted with warning signs.[517] Containers of asbestos-containing materials must be labeled[518] and MSDSs supplied if possible.[519] All employees exposed to airborne concentrations of asbestos must be included in a training program.[520]

If workplace exposure is a result of demolition, removal, or abatement activity, the regulated area must be under supervision of a "competent person"[521] who has extensive responsibilities for overseeing site safety and is analogous to the accredited contract supervisor under the Asbestos Hazard Emergency Response Act (AHERA).[522] Initial and periodic monitoring of airborne concentrations of asbestos fibers in work areas must be conducted if the potential for worker exposure exists,[523] and employees must be notified of the results of such monitoring activities.[524]

Workers exposed to asbestos must be provided protective clothing and equipment.[525] In the event employees are exposed to greater than the PEL, a formal respiratory protection program is required[526] and the employer must provide respiratory protection and protective clothing.[527] Personal hygiene facilities, including change room and shower, must be used to prevent the spreading of contamination to other non-regulated areas.[528] All persons included in the medical protection program should be subjected to yearly physical examinations, including chest X-Rays and lung function tests.[529] Records must be maintained not

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[516] *Id.* § 1910.1001(e), 1926.58(e).
[517] *Id.* § 1910.1001(j)(1), 1926.58(h)(1).
[518] *Id.* §§ 1910.1001(j)(2), 1926.58(h)(2).
[519] *Id.* §§ 1910.1001(j)(3), 1926.58(h)(3).
[520] *Id.* § 1910.1001(j)(5), 1926.58(h)(3).
[521] *Id.* § 1926.58(e)(6)(ii).
[522] 15 U.S.C. §§ 2641-2654 (1988).
[523] 29 C.F.R. §§ 1910.1001(d), 1926.58(f) (1989).
[524] *Id.* §§ 1910.1001(d)(7), 1926.58(d), (f)(6).
[525] *Id.* §§ 1910.1001(h), 1926.58(i).
[526] *Id.* § 1910.134.
[527] *Id.* §§ 1910.1001(g), 1926.58(h).
[528] 2*Id.* §§ 1910.1001(i), 1926.58(j).
[529] *Id.* §§ 1910.1001(l), 1926.58(m).

only for medical surveillance of workers, but also for all monitoring results and training.[530] Medical records of employees must be maintained for the term of employment, plus thirty years.[531]

Housekeeping activities are also particularly important to prevent the spread of asbestos fibers to non-contaminated areas.[532] Specialized techniques are needed to perform normal housekeeping duties to prevent significant exposure of custodial workers. Such activities include the use of special vacuums, wetting materials prior to shovelling and sweeping, when use of the vacuum is impracticable, and proper disposal.[533]

IV. Enforcement

The OSHA Act provides for both civil and criminal enforcement.[534] An employer who receives a citation from OSHA for a "serious violation" of these and other OSHA regulations must be assessed civil penalties up to $1000 for each violation.[535] A "serious violation" exists "if there is a substantial probability that death or serious physical harm could result from a condition which exists, or from one or more practices, means, methods, operations, or processes which have been adopted or are in use in such place of employment unless the employer did not, and could not with the exercise of reasonable diligence, know of the presence of the violation."[536] The same civil penalties may be assessed, in OSHA's discretion, for non-serious violations.[537] A "willful" violation carries a maximum civil penalty of $10,000 or imprisonment up to six months, or both.[538] Subsequent willful violations carry up to $20,000 in civil penalties or up to one year in prison, or both.[539] Knowingly making a false statement, representation or certification in any application, record, report, plan

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[530] *Id.* §§ 1910.1001(m), 1926.58(n).
[531] *Id.* §§ 1910.1001(m)(1)(iii), 1926.58(n)(3)(iii).
[532] *Id.* §§ 1910.1001(k), 1926.58(l).
[533] *Id.*
[534] *Id.* § 17, 29 U.S.C. § 666.
[535] *Id.* § 17(b), 29 U.S.C. § 666(b).
[536] *Id.* § 17(k), 29 U.S.C. § 666(k).
[537] *Id.* § 17(c), 29 U.S.C. § 666(c).
[538] *Id.* § 17(e), 29 U.S.C. § 666(e).
[538] *Id.*

or other document filed with OSHA may be punished by a civil penalty up to $10,000, or imprisonment up to six months, or both.[540]

TOXIC SUBSTANCES CONTROL ACT (TSCA)

Because of the increased presence of toxic chemicals in the marketplace and also because of the potential harm to both human health and the environment, the Council on Environmental Quality formulated a statutory and regulatory system focusing specifically on toxics.[541] The program, enacted in 1976 after much public and congressional debate, became known as the Toxic Substances Control Act.[542] TSCA was passed by Congress to initiate a review and control mechanism for the process of bringing a chemical substance[543] into the marketplace. This process includes the manufacture or importation, processing, and distribution of commercial products. Since the enactment of TSCA, Congress has added two additional titles to the Act: Title II, the Asbestos Hazard Emergency Response Act;[544] and, Title III, Indoor Radon Abatement.[545] Thus, the original act has been designated as Title I of TSCA.[546]

I. Title I—Control of Toxic Substances

A. Manufacture of Chemical Substances

TSCA established what amounts to a three-pronged national policy. First, TSCA acknowledged that manufacturers are

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[540] *Id.* § 17(f), 29 U.S.C. § 666(f).

[541] U.S. Environmental Protection Agency. The Toxic Substances Control Act, EPA No. 560/1-83-002 (July 1984) [hereinafter Toxic Substances].

[542] Toxic Substances Control Act (TSCA), 15 U.S.C. §§ 2601-2654 (1988).

[543] "Chemical substance" is defined as "any organic or inorganic substance of a particular molecular identity," including any combination of substances occurring from a chemical reaction or in nature and any element or uncombined radical. TSCA § 3(2)(A), 15 U.S.C. § 2602(2)(A) (1988). Excepted from the definition are mixtures, pesticides, tobacco and tobacco products, nuclear materials and by-products, firearms and ammunition, food, food additives, drugs, cosmetics, and devices used for diagnosis or treatment. TSCA § 3(2)(B), 15 U.S.C. § 2602(2)(B) (1988).

[544] TSCA §§ 201-214, 15 U.S.C. §§ 2641-2654 (1988).

[545] *Id.* §§ 301-311, 15 U.S.C. §§ 2661-2671.

[546] *Id.* §§ 2-31, 15 U.S.C. §§ 2601-30.

responsible for testing to determine a chemical substance's effect on health and the environment. Second, authority will be established to regulate chemical substances representing unacceptable risks to health and the environment. Finally, TSCA recognized that regulatory authority should not create an unnecessary burden to the economy while fulfilling the intent of TSCA.[547]

TSCA is predominantly a federally administered program and calls first for the testing of chemical substances and mixtures[548] and the submission of test data and other information to the EPA prior to manufacture, processing, and distribution in commerce.[549] Second, TSCA mandates the promulgation of chemical specific regulations for chemical substances which represent an unreasonable risk to health and the environment.[550] Of the over five million known chemical compounds, approximately sixty thousand are used commercially in the United States.[551] In order to reduce the quantity of compounds covered under TSCA, and to increase the consistency for regulating these chemicals and their mixtures, chemical substances regulated by other federal statutes are exempted from TSCA.[552]

1. Testing of Chemical Substances

The requirements for determining the health and environmental effects of chemical substances under TSCA are broad, and the EPA is granted significant discretionary power with respect to such testing.[553] The EPA has been called upon to compile and keep current a list of chemical substances which are manufactured or processed in the United States.[554] Testing requirements for a chemical substance are dependent upon whether the compound is considered to be a new[555] or existing

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[547] *Id.* § 2(b), 15 U.S.C. § 2601(b).
[548] *Id.* § 4, 15 U.S.C. § 2603.
[549] *Id.* § 5, 15 U.S.C. § 2604.
[550] *Id.* § 6, 15 U.S.C. § 2605.
[551] TOXIC SUBSTANCES, *supra* note 538, at 1.
[552] TSCA § 3(2)(B), 15 U.S.C. § 2602(2)(B) (1988).
[553] *Id.* § 4(a), 15 U.S.C. § 2603(a).
[554] *Id.* § 8(b), 15 U.S.C. § 2607(b).
[555] "New chemical substance" is defined as "any chemical substance which is not included in the chemical substances list compiled and published under section 2607(b) of this title." TSCA § 3(9), 15 U.S.C. § 2602(9) (1988). This listing, known as the TSCA

chemical substance.[556] Testing must be completed for new chemicals before they can be imported, manufactured, processed, or used in the United States.[557] The EPA is empowered to require testing of existing chemical substances if the material represents an unreasonable risk of injury to health or the environment.[558] For the EPA to require the testing of an existing chemical, the manufacture, processing, use, or disposal of the chemical must have the potential to present an unreasonable risk to health or the environment, or the chemical must be manufactured in substantial quantity with the potential for significant human exposure or release to the environment.[559] Accompanying either of these conditions must be the lack of scientific data to conduct an adequate risk assessment and the necessity of testing to provide the needed data.[560] TSCA also calls for the formation of an eight-member advisory committee[561] to maintain a list of chemicals to be given priority consideration for testing and evaluation.[562] The priority list is not to exceed fifty chemical substances. Each time the committee publishes this list, the EPA must either indicate the testing requirements for each chemical, or publish reasons why such testing is not necessary.[563]

2. Pre-Manufacture Notification

TSCA exercises significant control over novel uses of existing chemical substances, as well as the introduction of new chemical substances, through a process known as pre-manufac-

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Inventory, was initially compiled in 1979 and updated in 1985. The list contains approximately 70,000 compounds. Copies are available in both hard copy and magnetic computer tape. Hard copies are available from the Government Printing Office, (202) 783-3238 (Publication No. 055-000-00254-1), and tapes are available from the National Technical Information Service, (703) 487-4650 (Item # PB89120489).

[556] TSCA § 4-5, 15 U.S.C. §§ 2603-2604 (1988).

[557] *Id.* § 5(b), 15 U.S.C. § 2604(b).

[558] *Id.* § 4(a)(2), 15 U.S.C. § 2603(a)(2).

[559] *Id.* § 4(a)(1)(A)(i), (B)(i), 15 U.S.C. § 2603(a)(1)(A)(i), (B)(i).

[560] *Id.* § 4(a)(1)(A)(ii), (A)(iii), (B)(ii), (iii), 15 U.S.C. § 2603(a)(1)(A)(ii), (iii), (B)(ii), (iii).

[561] *Id.*; *see id.* § 4(e)(2)(A), 15 U.S.C. § 2603(e)(2)(A) (describing membership of advisory committee).

[562] *Id.* § 4(e)(1)(A), 15 U.S.C. § 2603(e)(1)(A).

[563] *Id.* § 4(e)(1)(B), 15 U.S.C. § 2603(e)(1)(B).

ture notification (PMN).[564] Any person intending to manufacture or process a new chemical substance[565] or proposing a significant new use for an existing chemical substance[566] must submit a PMN at least ninety days prior to production.[567] The PMN must include all relevant factors connected with the substance's manufacture and associated risks.[568] These factors include (1) the projected volume of the material to be produced, (2) the method of manufacture and processing, (3) how it will be distributed in commerce, and (4) the methods necessary for its disposal.[569] If the PMN is filed due to a proposed significant new use, information regarding changes in routes or duration of exposure must also be included.[570] Test data gathered to evaluate health and environmental risks must also be incorporated in the PMN.[571]

3. Restrictive Actions

In the event that the EPA determines a chemical substance represents an unreasonable risk, a variety of restrictive actions can be taken. Such actions can range from banning production, to limiting production amounts and commercial use, to restricting or banning the material from certain methods of disposal.[572] Manufacturers may also be required to mark containers with warnings or instructions for use and disposal.[573] TSCA also empowers the EPA to initiate a civil action for the seizure of an imminently hazardous chemical substance or mixture[574] or for appropriate relief from the manufacturer of such a chemical.[575]

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[564] *Id.* § 5, 15 U.S.C. § 2604.

[565] *Id.* § 5(a)(1)(A), 15 U.S.C. § 2604(a)(1)(A).

[566] *Id.* § 5(a)(1)(B), 15 U.S.C. § 2604(a)(1)(B).

[567] *Id.* § 5(a)(1), 15 U.S.C. § 2604(a)(1). This rule does include compounds produced primarily for research and experimentation. *Id.* § 5(h)(3), 15 U.S.C. § 2604(h)(3).

[568] *Id.* § 5(a)(2), 15 U.S.C. § 2604(a)(2).

[569] *Id.* § 5(a), 15 U.S.C. § 2604(a)(2).

[570] *Id.* § 5(a)(2)(B), 15 U.S.C. § 2604(a)(2)(B).

[571] *Id.* § 5(b), 15 U.S.C. § 2604(b).

[572] *Id.* § 6(a)(1)-(7), 15 U.S.C. § 2605(a)(1)-(7).

[573] *Id.*

[574] *See id.* § 7(f), 15 U.S.C. § 2606(f) (defining "imminently hazardous chemical substance or mixture").

[575] *Id.* § 7(a)(1)(A), 15 U.S.C. § 2606(a)(1)(A).

The EPA has exercised its authority under TSCA to develop specific requirements for the manufacture, processing, use, and disposal of selected chemical substances.[576] To date, standards have been promulgated for PCBs,[577] asbestos,[578] chlorofluorocarbons,[579] and the testing of substances for the presence of dioxins and dibenzofurans.[580] These will be discussed below.

B. PCBs

The EPA has determined that exposure to items containing fifty parts per million (ppm) or greater of PCBs[581] represents an unreasonable risk of injury to health.[582] Under the authority of TSCA,[583] the EPA established manufacturing bans and promulgated requirements for the manufacture, processing, distribution in commerce, use, storage and marking, and disposal of PCBs and PCB-containing materials.[584]

1. Management

According to the regulations, no person may manufacture PCBs for use within the United States or for export unless he has received an exemption.[585] Processing and distribution in commerce are similarly banned, subject to certain exclusions.[586] Use of PCBs or PCB items, regardless of the concentrations, must be completed in a "totally enclosed manner,"[587] which is defined as "any manner that will ensure no exposure of human

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[576] *Id.* § 6(a), 15 U.S.C. § 2605(a).

[577] 40 C.F.R. § 761 (1989).

[578] *Id.*

[579] *Id.*

[580] *Id.*

[581] PCBs (polychlorinated biphenyls) are "any chemical substance that is limited to the biphenyl molecule that has been chlorinated to varying degrees or any combination of substances which contain such substance." 40 C.F.R. § 761.3 (1989).

[582] *Id.* § 761.20.

[583] TSCA §§ 6(e), 12(a)(2), 15 U.S.C. §§ 2605(e), 2611(a)(2) (1988).

[584] 40 C.F.R. §§ 761.1(a), .1(b), .20, .80 (1989).

[585] *Id.* § 761.20(b); *see id.* § .80 (granting exemptions to particular manufacturers).

[586] *Id.* § 761.20(c).

[587] *Id.* § 761.20(a).

beings or the environment to any concentrations of PCBs."[588]

A variety of uses of PCBs in a non-totally enclosed manner are authorized, with the majority of those exceptions involving electrical equipment and dielectric fluids.[589] Electrical equipment is classified according to the concentration of PCBs it contains. A "PCB Transformer" contains 500 ppm or greater of PCBs, while "PCB-contaminated electrical equipment" contains between fifty ppm and 500 ppm.[590] "Non-PCB Transformers" contain less than fifty ppm PCBs and are not subject to the regulations.[591] Various restrictions and requirements are established for use and servicing of the above regulated equipment.[592]

PCB items are required to be marked with a specified label (M_l)[593] according to the concentration of PCBs.[594] The M_L is required if PCBs are present in concentrations of 500 ppm or greater, while an alternative label is used on PCB-contaminated equipment.[595] Vehicles used to transport PCB items and entrances to locations containing PCB transformers must also be marked with the M_L label.[596] All placements of the M_l label are to be in such a manner that the label can be easily read by individuals servicing marked PCB items or transport vehicles.[597] Entrances to locations containing PCB transformers are also to be marked in a manner so they can be easily read by emergency response personnel fighting a fire involving this equipment.[598]

Continued use of PCB transformers in a non-totally enclosed fashion is subject to conditions of both use and routine inspections.[599] PCB transformers used "in or near commercial buildings" are required to be protected to avoid transformer

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[588] *Id.* § 761.30.
[589] *Id.*
[590] *Id.*
[591] *Id.*
[592] *Id.* § 761.30(a)(1), (2), (b)(1), (2), (h)(1), (2), (l)(1), (m)(1).
[593] *Id.* § 761.45.
[594] *Id.* § 761.40.
[595] *Id.* §§ 761.40, .45.
[596] *Id.* § 761.40(b).
[597] *Id.* § 761.40(h).
[598] *Id.* § 761.40(j)(3).
[599] *Id.* § 761.30(a).

ruptures in the event of faults.[600] PCB transformers in commercial buildings must be registered with the owners of the buildings while those located near commercial buildings must be registered with owners of all buildings within thirty meters of its location.[601] All PCB transformers, including those in storage for reuse, must be registered with the fire authority in charge of handling any fire emergency at the site.[602]

Combustible materials such as plastic, paper, wood and others, are not to be stored within five meters of PCB transformers.[603] A visual inspection of transformers must be made each quarter with a minimum of thirty days between inspections.[604] The frequency of inspection, however, may vary if risk reduction precautions are taken,[605] or if the unit poses an exposure risk to food or feed.[606] Inspections are to be conducted for improper storage of combustible materials and for transformer "leaks,"[607] including any quantity of PCBs running off or about to run off the external surface of the unit.[608] In the event a leak is detected, cleanup of the released materials must begin with 48 hours.[609] Records must be maintained detailing inspections and any maintenance of PCB transformers for at least three years after disposing of the transformers.[610] In the event that a PCB transformer is involved in a "fire-related incident," the incident must be immediately reported to the National Response Center.[611] A "fire-related incident" is defined as any situation generating enough heat and/or pressure to rupture the unit and

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[600] *Id.* § 761.30(a)(1)(iv)-(v). "In or near" is defined as being within 30 meters of those buildings that are accessible to both members of the general public and employees. *Id.*

[601] *Id.* § 761.30(a)(1)(vii).

[602] *Id.* § 761.30(a)(1)(vi).

[603] *Id.* § 761.30(a)(1)(viii).

[604] *Id.* § 761.30(a)(1)(ix).

[605] *Id.* § 761.30(a)(1)(xiii).

[606] *Id.* § 761.30(a)(1)(xiv).

[607] *See* 40 C.F.R. § 761.30(a)(1)(x) (1989) (defining leak as any quantity running off or about to run off the external surface of the unit).

[608] 40 C.F.R. § 761.30(a)(1)(viii), (x) (1989).

[609] *Id.* § 761.30(a)(1)(x).

[610] *Id.* § 761.30(a)(1)(xii).

[611] *Id.* § 761.30(a)(1)(xi).

release PCBs to the environment.[612]

The servicing of PCB transformers is also subject to regulated restrictions.[613] PCBs removed during any servicing activity must be captured and either reused or disposed of as a PCB material.[614] Servicing activities that require removal of the transformer coil from its casing are strictly prohibited.[615] "PCB transformers" may be converted to "PCB contaminated electrical equipment" or "non-PCB transformers" by draining and refilling them with non-PCB oil.[616] Sampling and testing of fluid for PCB concentration for the purpose of reclassification is not to be conducted until the unit has been placed back "into service" for a minimum of three months.[617] Similar restrictions on use and servicing of railroad transformers have also been established.[618]

2. Spill Cleanup

The EPA has developed a Spill Cleanup Policy for PCBs.[619] This policy makes a distinction between old and new spills, with cleanup of old spills being delegated more to the discretionary authority of the EPA regional administrators.[620] The EPA has expressly retained a certain amount of flexibility to deal with spills requiring more or less stringent cleanup activities than the normal cleanup requirements.[621] Some spills have been excluded from consideration under this policy since they may be more appropriately or effectively conducted under other statutes.[622]

Cleanup standards have been established for spills of PCBs of concentrations of fifty ppm or greater.[623] Appropriate notifica-

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[612] *Id.*

[613] *Id.* § 761.30(a)(2).

[614] *Id.* § 761.30(a)(2)(iii).

[615] *Id.* § 761.30(a)(2)(ii).

[616] *Id.* § 761.30(a)(2)(v).

[617] *Id.* "Into service" is defined as being placed under load conditions that raise the temperature of the dielectric to at least 50C (122F). Similar restrictions on use and servicing of railroad transformers have also been established. *Id.*

[618] *Id.* § 761.30(b).

[619] *Id.* § 761.120.

[620] *Id.* § 761.120(a)(1)(ii).

[621] *Id.* § 761.120(b)-(c).

[622] *Id.* § 761.120(d)-(e).

[623] *Id.* § 761.125.

tion of the release must be made when a spill has been identified.[624] The boundaries of the spill are established by either visual inspection or by use of a statistically-based sampling scheme.[625] Cleanup requirements vary as a function of the total mass of PCB released. Generally, there are separate requirements for cleanup of spills of less than one pound of PCBs and of those far greater than one pound of PCBs.[626] All soils, rags, and other materials generated or used in the cleanup activity are required to be stored in containers which have been properly marked and to be disposed of as PCB material.[627]

3. Storage and Disposal

The EPA has established standards for the storage and disposal of PCBs.[628] Areas used to store PCBs on-site prior to transport to a disposal facility must be constructed in a manner that prevents the release into the environment of any leaks from the stored containers.[629] Commercial facilities for storage of PCBs prior to disposal are now subject to approval by the EPA regional administrator.[630] The various options for disposal of PCBs approved by the EPA vary for PCBs, PCB articles,[631] PCB containers;[632] and spills and PCB-contaminated debris.[633] Authorized disposal options include the destruction of PCBs in an incinerator which complies with PCB incineration standards,[634] landfills at a facility which complies with PCB landfill standards,[635] burning in a high-efficiency boiler,[636] or by an alter-

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[624] *Id.* § 761.125(a)(1).

[625] *Id.* § 761.125(a)(3).

[626] *Id.* § 761.125(b)-(c).

[627] *Id.* § 761.125(a)(2).

[628] *Id.* §§ 761.60, .65.

[628] *Id.* § 761.765(b).

[630] *Id.* § 761.65(d).

[631] *See id.* § 761.3 (PCB articles defined as "any manufactured article, other than a PCB Container, that contains PCBs and whose surface(s) has been in direct contact with PCBs," including capacitors, transformers, electrical motors, pumps, and pipes).

[832] *See id.* § 763.1 (PCB containers defined as "any package, can, bottle, bag, barrel, drum, tank, or other device that contains PCBs or PCB Articles and whose surface(s) has been in direct contact with PCBs.").

[633] *Id.* § 761.60.

[634] *Id.* § 761.70.

[635] *Id.* § 761.75.

native method of destruction equivalent to a PCB incinerator or a high-efficiency boiler.[637]

4. Disposal Records and Reports

A cradle-to-grave tracking system similar to the one used in RCRA[638] has been implemented for PCB disposal.[639] Generators, transporters, commercial storage facilities, and disposal facilities are required to notify and obtain a unique identification number.[640] The "uniform hazardous waste manifest"[641] is to be used as shipping papers for transport of PCBs from the site of generation to the approved disposal facility.[642] The manifest serves both as both DOT shipping papers[643] and as a tracking document.[644] Exception reports are to be filed with the EPA regional administrator after forty-five days if a signed copy of the manifest has not been returned to the generator by the disposal facility and the generator has not been able to determine the location of the PCB waste.[645] A certificate of disposal is to be returned to the generator within thirty days after destruction of the waste.[646]

Records of disposals are required to be maintained by both the generators and the disposal facilities.[647] Generators are also required to maintain records of PCBs and PCB items[648] in service.[649] Records must be maintained by importers and persons generating PCBs in excluded manufacturing processes,[650] as well

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[636] *Id.* § 761.60(a)(2)(iii).

[637] *Id.* § 761.60(e).

[638] *See supra* notes 37-117 (discussing RCRA cradle-to-grave regulatory scheme).

[639] 54 Fed. Reg. 52,752-52,756 (1989) (to be codified at 40 C.F.R. § 761.202-.218).

[640] 54 Fed. Reg. 52,752 (1989) (to be codified at 40 C.F.R. § 761.202).

[641] 40 C.F.R. § 262 apps. A, B (Form 8700-22) (1989).

[642] 54 Fed. Reg. 52,753-52,755 (1989) (to be codified at 40 C.F.R. §§ 761.207-.208).

[643] 40 C.F.R. § 171.8 (1989).

[644] 54 Fed. Reg. 52,753-52,755 (1989) (to be codified at 40 C.F.R. § 761.207-.210).

[645] 54 Fed. Reg. 52,755-52,756 (1989) (to be codified at 40 C.F.R. § 761.215).

[646] 54 Fed. Reg. 52,756 (1989) (to be codified at 40 C.F.R. § 761.218).

[647] 40 C.F.R. § 761.180 (1989).

[648] *See id.* § 761.3 (PCB item defined as "any PCB Article, PCB Article Container, PCB Container, or PCB Equipment, that deliberately or unintentionally contains or has a part of it any PCB or PCBs").

[649] 40 C.F.R. § 761.180(a) (1989).

[650] *Id.* §§ 761.185, .187.

as persons who manufacture, import, or use chemicals containing inadvertently generated PCBs.[651]

5. Enforcement

Enforcement of PCB regulations is conducted by the EPA under the authority of section 16 of TSCA. This section provides for civil penalties of up to $25,000 per violation,[652] as well as criminal prosecution in the event of willful and knowing violations.[653] Under section 17 of TSCA, the federal district courts are granted authority to enjoin activities prohibited by these regulations, compel actions called for in these regulations,[654] and issue orders to seize PCBs and PCB items in violation of these regulations.[655]

C. CFCs

Chlorofluorocarbon (CFC) compounds have been used extensively in the United States as solvents, aerosol propellants, and refrigerants, in the production of urethane foams. These compounds are also claimed to represent an environmental threat via destruction of the stratospheric ozone. Restrictions on the manufacture and use of CFCs have been addressed under TSCA.[656] Regulations have been promulgated which prohibit the manufacture of fully-halogenated CFC subject to certain exemptions,[657] and which require the maintenance of records and the submission of annual reports by manufacturers and processors who are exempt from the general prohibition.[658]

The manufacturing, processing, and distribution in commerce of fully-halogenated CFCs for use as aerosol propellants was banned after October 15, 1978.[659] A selected variety of applications, however, are deemed essential and are exempted from

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[651] *Id.* § 761.193.
[652] TSCA § 16(a)(1), 15 U.S.C. § 2615(a)(1) (1988).
[653] *Id.* § 16(b), 15 U.S.C. § 2615(1)(b).
[654] *Id.* § 17(a), 15 U.S.C. § 2616(a).
[655] *Id.* § 17(b), 15 U.S.C. § 2616(b).
[656] *Id.* §§ 3, 6, 8, 12, 15 U.S.C. §§ 2602, 2605, 2607, 2611.
[657] 40 C.F.R. §§ 762.45-.59 (1989).
[658] *Id.* §§ 762.60, .70.
[659] *Id.* §§ 762.45, .50, .55.

the ban.[660] These applications include, among others, aerosol propellants for mercaptan stench warning sprays for natural gas leaks, release agents for injection molding of plastics, flying insect pesticides, articles necessary for the servicing of aircraft, and lubricants used in the manufacture of pharmaceutical tablets.[661]

Special exemptions were also offered for limited use and processing of fully halogenated CFCs by a few manufacturers until 1983.[662] The manufacturers and processors who qualified for this exemption were required to submit annual reports of materials processed for the calendar years 1978 through 1982.[663] Enforcement of CFC regulations is accomplished in a fashion analogous to enforcement of PCB regulations.[664]

D. Dioxins

"Halogenated dioxins and dibenzofurans"[665] represent two homologous series of halogenated aromatic organic compounds. Selected members of these groups appear to be powerful carcinogens, with the 2,3,7,8 - tetrachlorodibenzo-p-dioxin (TCDD) being the "congener"[666] most frequently discussed. Dioxins and dibenzofurans are frequently identified as oxidation products of PCBs or as by-products of the manufacture of halogenated aromatic chemicals, such as the herbicide 2,4,5-T (agent orange). The EPA has identified two series of such "chemical substances" which are likely to be contaminated by dioxins or dibenzofurans resulting from the manufacturing process.[667]

The EPA requires that any person who manufactures, imports, or processes a chemical contained in one of the two lists or uses one of the listed chemicals as a precursor to a chemical process must test for the presence of dioxins and dibenzofurans un-

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[660] *Id.* § 762.58.

[661] *Id.*

[662] *Id.* § 762.59.

[663] *Id.* §§ 762.60, .65, .70.

[664] 15 U.S.C. § 2614 (1988).

[665] *See* 40 C.F.R. § 766.3 (1989) (providing technical definition of these terms).

[666] "Congener" means a particular member of a homologous series of chemical compounds, such as TCDD.

[667] 40 C.F.R. § 766.25(a)(1), (2) (1989).

less granted an exclusion or waiver.[668] A single sampling and testing protocol has not been established by the EPA because of the variability of physical and chemical properties of the chemical substances subject to testing.[669] Each manufacturer or processor subject to the testing requirement must submit a letter of intent to test[670] along with a proposed sampling and analysis protocol[671] which will be reviewed by an EPA "expert panel."[672] The testing protocol must follow established analytical guidelines[673] and should also follow published guidelines for quality assurance.[674]

Target levels for sensitivity for selected dioxin and dibenzofuran congeners have been established.[675] Labs conducting these quantitative analyses are required to meet these standards.[676] All of the results from the testing of the chemical substances subject to these standards must be submitted to the EPA.[677] Any person who fails or refuses to comply with any part of these regulations is subject to both civil and criminal prosecution under TSCA enforcement provisions.[678]

II. Title II—Asbestos Hazard Emergency Response Act (AHERA)

"Asbestos"[679] is a naturally occurring fibrous mineral with remarkable properties of resistance to degradation by chemical, thermal, or mechanical action. Asbestos has been extensively

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[668] *Id.* §§ 766.2(a), (b), .1(c), .20.

[669] *Id.* § 766.16.

[670] *Id.* § 766.35(a).

[671] *Id.* § 766.1(c).

[672] *Id.* § 766.10, .28.

[673] *See id.* § 766.12 (test methods must be similar to those in *Guidelines for Determination of Polyhalogenated Dibenzo-p-dioxins and Dibenzofurans in Commercial Products*, copies of which are available from EPA).

[674] *See id.* § 766.14 (protocols should include all parts listed in *Quality Assurance Plan for Measurement of Bromiated or Chlorinated Dibenzofurans and Dibenzodioxins*, copies of which are available from EPA).

[675] *Id.* § 766.27.

[676] *Id.* § 766.18.

[677] *Id.* § 766.35(b), (c).

[678] 15 U.S.C. § 2614 (1988).

[679] *See* 40 C.F.R. § 763.83 (1989) (asbestos is interpreted as asbestiform varieties of chrysotile, crocidolite, amosite, anthophyllite, tremolite, and actinolite).

used as fireproofing and thermal insulation, gasket material and a strengthening agent for composite materials such as concrete. Over the past century, increasing evidence of the health risks associated with exposure to airborne asbestos fibers has been extensively studied. Asbestos has been classified as a known human carcinogen[680] capable of producing lung cancer and acting synergistically with the smoking of tobacco to produce lung cancer.[681] Asbestos has also been demonstrated to produce a rare, always fatal, form of cancer called mesothelioma.[682] This disease gained public notoriety when the prominent actor, Steve McQueen, was diagnosed and later died from mesothelioma.

A variety of restrictive measures have been undertaken by the EPA[683] and OSHA[684] to limit exposure of individuals. One of the primary ways in which general practitioners will encounter asbestos is through the Asbestos Hazard Emergency Response Act (AHERA).[685] AHERA has a major impact on management of asbestos in schools; additionally, AHERA-like requirements may be extended on a national level to also address public buildings as well as some non-residential private buildings. To some extent, this has already occurred in the State of Mississippi.[686] The remainder of this discussion will deal with AHERA and its

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[680] U.S. Dep't of Health and Human Services, Fifth Annual Report on Carcinogens, Summary 1989, NTP 89-239.

[681] *Id.* Exposures to mixtures typically result in an additive risk to the individual; however, some compounds tend to magnify the effect each has, and an overall effect much larger than a simple cumulative one results. This multiplicative, or exponential, effect is referred to as synergism.

[682] *Id.*

[683] *See* 40 C.F.R. § 61 Subpt. M (airborne emission restrictions); § 302.4 (release reporting); § 763.60 (1989) (reporting requirements for commercial and industrial asbestos use); § 372.65(a), (b) (emergency planning); § 763.60 (1989) (reporting requirements for commercial and industrial asbestos use); § 763.120 (regulations governing abatement projects).

[684] *See* 29 C.F.R. §§ 1910.1001, .1101 (1988) (OSHA standards limiting exposure to airborne asbestos particles).

[685] Asbestos Hazard Emergency Response Act (AHERA), 15 U.S.C. §§ 2641-2655 (1988).

[686] *See* Asbestos Abatement Accreditation and Certification Act (AAACA), MISS. CODE ANN. § 37-138-3 (Supp. 1989) (preamble to Act stating that purpose of Act is to evaluate and abate asbestos hazard in schools and "in all public and commercial buildings in this state"). For a more detailed discussion of AAACA, *see supra* notes 757-69 and accompanying text.

implementation in Mississippi.

A. Background Information

Regulations promulgated pursuant to AHERA call for school authorities to inspect public and private school buildings, kindergarten through high school, for friable and non-friable asbestos.[687] "Local Education Agencies" (LEAs), which are local public school boards and private school owners, are required to institute management activities to reduce the potential for building occupant exposure to airborne asbestos fibers.[688] LEAs must also maintain records of management practices[689] and ensure that the disposal of all asbestos-containing waste materials is done in a manner consistent with the regulations.[690] LEAs may contractually delegate these duties, but they remain primarily responsible for carrying them out.[691]

An "Asbestos-Containing Material (ACM)" is defined as any substance containing greater than one percent of asbestos on a dry weight basis.[692] AHERA establishes regulations for the management of "asbestos-containing building materials" (ACBM),[693] which, like ACM, can be either "friable" or "non-friable."[694] Friable ACBM is that ACM which, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.[695] Management of ACBM is based upon identification through inspection and sampling of buildings for the presence of ACBM,[696] development of a "management plan" for each building,[697] and initiation of response actions in the event that "damaged"

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[687] 40 C.F.R. § 763.85 (1989).

[688] *Id.* § 763.91.

[689] *Id.* § 763.94.

[690] *Id.* § 763 Subpart E, app. D.

[691] *Id.* § 763.80(a).

[692] *Id.* § 763.83.

[693] ACBM is considered to be ACM found in or on structural members of the interior of a building and also includes ACM on building porticos and covered walkways. ACBM can be classified as surfacing material, thermal system insulation (TSI), and miscellaneous ACBM. 40 C.F.R. § 763.83 (1989).

[694] *Id.*

[695] *Id.*

[696] *Id.* §§ 763.85-.87.

[697] *Id.* § 763.93.

ACBM is discovered.[698]

B. Management Activities

1. Inspections

LEA's are required to complete an inspection of each school building they own, lease, or use to identify locations of friable and non-friable ACBM[699] before the building is used as a school.[700] All inspections must be completed by an accredited inspector.[701] The inspection will entail a visual inspection of the area to locate areas of possible ACBM, touching of the surface to determine friability, and identification of all homogeneous areas of friable material.[702] Homogeneous areas are defined as those ACBM materials that are uniform in color and texture.[703] Once homogeneous areas for each type of suspected ACBM have been established, the inspector must develop a sampling scheme.[704] This must be a statistically valid, random sampling technique and must take into account the type of homogeneous area being inspected.[705] The regulations require the taking of a minimum number of samples for surfacing material,[706] thermal system insulation,[707] and miscellaneous materials.[708] The samples cannot be composited,[709] and they must be analyzed through the use of polarized light microscopy (PLM) in a laboratory which is accredited by the National Institute for Standards and Testing (NIST).[710] Results of the analyses are to be reported as less than or equal to one percent or greater than one percent asbestos.[711] A homogeneous area must be considered ACBM if any one of

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[698] *Id.* § 766.90.
[699] *Id.* § 763.85(a).
[700] *Id.* § 763.85(a)(2).
[701] *Id.* § 763.85(a)(3).
[702] *Id.* § 763.85(a)(4).
[703] *Id.* § 763.83.
[704] *Id.* § 763.86.
[705] *Id.*
[706] *Id.* § 763.86(a).
[707] *Id.* § 763.86(b).
[708] *Id.* § 763.86(c).
[709] *Id.* § 763.87(b).
[710] *Id.* § 763.87(a).
[711] *Id.* § 763.87(b)(2).

the samples collected from it contains greater than one percent asbestos.[712]

Inspectors are also required to conduct a physical assessment of the homogeneous areas of ACBM.[713] All homogeneous areas of ACBM or homogeneous areas assumed to be ACBM must be assessed and classified by the inspector into one of seven categories.[714] An inspection report must be compiled by the inspector within thirty days after the inspection and is to include all homogeneous areas of suspect ACBM, homogeneous areas identified as ACBM, and homogeneous areas assumed to be ACBM.[715] The inspector must also provide a written statement as to the reasons for assessing homogeneous areas of ACBM into one of the seven categories.[716] The inspection report must have the name and signature of each accredited inspector making the inspection and assessment, states of accreditation, and his or her accreditation number.[717] LEAs are required to have reinspections of all buildings at least once every three years after a management plan is placed into effect.[718]

2. Asbestos Management

a. Management Plan

Each LEA shall develop an asbestos management plan for each building it owns, leases, or uses as a school building.[719] The management plan must be developed by an accredited management planner and must include information concerning each inspection conducted, as well as a description of the assessments conducted for all homogeneous areas of ACBM, or suspected ACBM assumed to be ACM.[720] The management planner will include recommendations concerning response actions, along with the name, signature, and state of accreditation of each person

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[712] *Id.* § 763.87(c)(2).
[713] *Id.* § 763.88(a)(2).
[714] *Id.* § 763.88(b).
[715] *Id.* § 763.85(a)(4)(vi).
[716] *Id.* § 763.88(b).
[717] *Id.* § 763.85(a)(4)(vi)(E).
[718] *Id.* § 763.85(b).
[719] *Id.* § 763.93(a)(1).
[720] *Id.* § 763.93(e).

making recommendations.[721] The management plan should also include the name, address and telephone number of the person designated by the school to ensure that duties of the LEA are carried out.[722] Training received by the LEA's designated person must also be found in the management plan.[723]

The management planner employed by the LEA will conduct a hazards assessment of all homogeneous areas of ACBM or ACBM assumed to be ACM.[724] This assessment generally includes an evaluation of the condition of the material, type of material and extent of damage, source of damage, accessibility of the material, and use of the area.[725] On the basis of the above information and the management planner's professional judgment, recommendations will be made to the LEA concerning response actions necessary for any damage or significantly damaged ACBM.[726] The management plan must be submitted to the "governor's designee"[727] for approval.[728] In Mississippi, the Governor has designated the State Department of Education as the agency to collect and approve management plans.[729]

b. Operations and Maintenance.

Each LEA must also establish and implement an operations, maintenance, and repair program (O & M) for every building it leases, owns, or otherwise uses as a school.[730] All O&M programs must consist of worker protection considerations,[731] special cleaning techniques,[732] O&M activities,[733] and small-

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[721] *Id.* § 763.93(e)(5).
[722] *Id.* § 763.93(e)(4).
[723] *Id.*
[724] *Id.* § 763.89(d).
[725] *Id.* § 763.89(c).
[726] *Id.* § 763.89(d).
[727] TSCA § 205, 15 U.S.C. § 2645 (1988).
[728] 40 C.F.R. § 763.93(a).
[729] Letter from Governor Ray Mabus to Mr. Lee A. Dellins, Acting Director of Region IV EPA, March 11, 1988.
[730] 40 C.F.R. § 763.91(a). The operations and maintenance program is designed to keep the existing ACBM in acceptable condition, reduce the amount of fibers previously released, and avoid releasing anything further. *Id.* § 763.83.
[731] *Id.* § 763.91(d).
[732] *Id.* § 763.91(c).
[733] *Id.* § 763.91(d).

scale, short duration maintenance operations.[734] Any custodial or maintenance individual working in a school building that contains ACBM or areas assumed to be ACM, must receive awareness training of at least two hours.[735] Any custodial or maintenance employees who may, during the course of their responsibilities, disturb ACBM will receive an additional fourteen hours of training.[736] All individuals employed in an AHERA regulated facility are also subject to the EPA Worker Protection Rule.[737]

The LEA is required to conduct a periodic surveillance of each building that it owns, leases, or otherwise uses as a school at least once every six months.[738] This surveillance must include a visual inspection of all areas identified in the management plan, as well as the date, conditions noted, any changes in conditions since the last surveillance, and the name of the individual conducting the surveillance.[739] Results of this periodic surveillance to the facility's designated person.[740]

c. Abatement Activities

When damaged ACBM is discovered in a building, the LEA will select and implement a "response action"[741] to protect human health and the environment.[742] Any type of response action activity, other than small-scale, short duration maintenance activities, must be designed and performed by accredited personnel.[743] Therefore, response actions must be designed by accredited project designers, conducted by supervision under ac-

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[734] *Id.* § 763 Subpt. E, app. B.

[735] *Id.* § 763.92(a).

[736] *Id.* § 763.92(a)(2).

[737] The EPA Worker Protection Rule imposes a health protection standard on state and local government employees to protect them from exposure to airborne asbestos fibers during an abatement operation. *Id.* § 763.120-.121.

[738] *Id.* § 763.92(b).

[739] *Id.* § 763.92(b)(2).

[740] *Id.* § 763.92(b)(2)(iii).

[741] Under AHERA, a response action means a method including removal, encapsulation, enclosure, repair, or O&M, that protects human health and the environment from friable ACBM. 40 C.F.R. § 763.83 (1989).

[742] *Id.* § 763.90(a), (b).

[743] *Id.* § 763.90(g).

credited project supervisors, and performed by accredited workers.[744] Response actions to major fiber releases must also be conducted by accredited personnel.[745] Major fiber release episodes are said to have occurred if greater than three square or linear feet or ACBM falls or becomes dislodged.[746]

LEAs are required to conduct aggressive air testing in order to demonstrate completion of the response action.[747] Analysis of the samples is required to be completed in accordance with the transmission electron microscopy (TEM) method.[748] Until October 7, 1990, LEAs were allowed to use the less expensive NIOSH method 7400 of phase contrast microscopy (PCM) analysis to determine clearance response actions that are equal to or less than 1500 square or 500 linear feet in size.[749] As with custodial or maintenance workers, all individuals involved in response actions are subject to the EPA Worker Protection Rule for asbestos.[750]

Any response action or renovation conducted by a school which will disturb ACM is subject to asbestos National Emission Standards for Hazardous Air Pollutants (NESHAP) notification prior to conducting of such work activities.[751] Transportation of asbestos containing waste material from the site of the abatement action to the landfill is subject to the Hazardous Materials Transportation Act,[752] and disposal of the asbestos containing waste material must comply with the conditions of the asbestos NESHAP.[753] Additional waste handling and disposal requirements are listed in Appendix D of AHERA.[754]

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[744] *Id.*

[745] *Id.* § 763.91(f)(2)(iii).

[746] *Id.* § 763.91(f)(2).

[747] *Id.* § 763.90(i)(2).

[748] *Id.* § 763 Subt. E, app. A. The PCM method is approximately a factor of 10 cheaper than TEM. The major drawback is that PCM cannot distinguish between asbestos and "other" fibers. TEM is capable of visualizing small particles and can positively identify them as asbestos.

[749] *Id.* § 763.90(i)(7).

[750] *Id.* §§ 763.120-.121.

[751] *Id.* § 61 subpt. M.

[752] *Id.* § 173 subpt. J.

[753] *Id.* § 61.152.

[754] *Id.* § 763 Subpt. E, app. D.

C. Accreditation of Workers

1. AHERA Requirements

A major criticism of the 1982 Asbestos-in-Schools Rule[755] was that it did not require implementation of response actions or the use of accredited persons for the identification and abatement of asbestos in the schools.[756] This shortcoming was addressed under AHERA by the inclusion of a Model Contractor Accreditation Plan.[757] The Model Accreditation Plan which provides guidelines for proper accreditation of asbestos personnel consists of six parts: (1) initial training, (2) examinations, (3) refresher training course, (4) qualifications of the worker, (5) certification requirements, and (6) reciprocity with other states.[758] Building inspections, the writing of management plans, design of abatement projects, oversight of abatement projects, and other abatement activities must all be conducted by persons with proper accreditation.[759] The accreditation plan recommends minimum education qualifications for each position and requires successful completion of an EPA-approved course at an EPA-approved training center.[760] The process has also been established whereby a state may administer its own State Contractor Accreditation Program.[761] Mississippi is in the process of requesting authorization for accreditation in Mississippi under the Asbestos Abatement Accreditation and Certification Act (AAACA).[762]

2. Mississippi Requirements

The AAACA provides for accreditation of persons who per-

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[755] Fed. Reg. 23,369 (1982).

[756] 15 U.S.C. § 2641(a)(1), (2) (1988).

[757] 40 C.F.R. § 763 Subpt. E, app. C (1989).

[758] *Id.*

[759] *Id.*

[760] *Id.* § 763 Subpart E, Appendix C (III).

[761] *Id.* § 763 Subpart E, Appendix C (II).

[762] AAACA, MISS. CODE ANN. § 37-138-1 to -29 (Supp. 1990). The proposal for authorization will be drafted by the EPA Region IV Asbestos coordinator and, upon approval, will be implemented; *see also* MISS. CODE ANN. § 37-137-33 (Supp. 1990) (authorizing general fund appropriations to Department of Education for loans and grants to school districts for abatement of friable ACM).

form inspections or reinspections, prepare management plans, and perform as contractors, project designers, supervisors, and workers in asbestos abatement actions.[763] It is important to note that all public and commercial buildings in Mississippi, as well as public and private elementary and secondary school buildings, are subject to this accreditation act.[764] The administrative cost will be born fully by certification fees provided for in the act.[765] All of the criteria for accreditation outlined in the Federal Model Plan are included in this Act. Each trainee must successfully complete the training, pass an examination, demonstrate competency to the commission, pay the annual certificate fees, and possess.[766] The minimal educational and professional qualifications for each position, as required by the Act are as follows: (1) Management Planner, registered professional engineer, registered architect, or current EPA accreditation (as of April 1, 1990);[767] (2) Project Designer, registered professional engineer or registered architect or current EPA accreditation (as of April 1, 1990);[768] (3) Contractor, high school diploma;[769] (4) Contract Supervisor, high school diploma;[770] (5) Inspector, high school diploma;[771] and (6) Contract Worker, unspecified.[772] The Act authorizes the Mississippi Commission on Environmental Quality to promulgate regulations for the undertaking of abatement and routine maintenance actions without the utilization of certified personnel.[773] Regulations have accordingly been promulgated by the Commission for the implementation of the AAACA. These regulations and others required to be promulgated on or before August 1, 1990, will go into effect on November 1, 1990.[774]

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[763] MISS. CODE ANN. § 37-138-3 (Supp. 1990).

[764] *Id.*

[765] *Id.* § 37-138-25.

[766] *Id.* § 37-138-7.

[767] *Id.* § 37-138-11; H.R. 913 (signed by Governor, April 3, 1990).

[768] MISS. CODE ANN. § 37-138-13 (Supp. 1990); H.R. 913 (signed by Governor, April 3, 1990).

[769] MISS. CODE ANN. § 37-138-15 (Supp. 1990).

[770] *Id.* § 37-138-17.

[771] *Id.* § 37-138-19.

[772] *Id.* § 37-138-21.

[773] *Id.* § 37-138-9(a); H.B. 913 (signed by Governor, April 3, 1990).

[774] Regulations for Accreditation and Certification of Asbestos Abatement Personnel (Dec. 22, 1989).

D. Enforcement

As with other chemical specific regulations under TSCA, enforcement is authorized under section 15.[775] Willful and knowing violations can result in criminal penalties under section 16(b) of TSCA.[776] Injunctive relief can also be sought in the event of imminent and substantial human endangerment.[777] In the event a citizen lodges a complaint to either the governor or the EPA,[778] the EPA may also conduct inspections and review management plans to guarantee compliance.[779] Penalties, reprimands, suspensions, and revocations can also be levied under the Mississippi AAACA after November 1, 1990 for failure to satisfy accredidation requirements for asbestos abatement statement personnel.[780]

III. Title III—Indoor Radon Abatement

Radon is a naturally-occurring inert gas which may contaminate air, soil, water or any other media. This radioactive element is an efficient emitter of subatomic alpha particles and asserted to represent a significant health risk when inhaled. Continued breathing of air contaminated with low levels of radon can lead to lung cancer. The greatest risk occurs in areas that allow build-up of radon concentrations because of poor ventilation upon the release of the gas from soil or water. Crawl spaces under houses, basements, and houses constructed on concrete slabs with minimal allowance for turnover of indoor air should therefore be evaluated for build-up of radon.

Congress recognized the serious potential risk and responded with passage of title III of TSCA dealing with Indoor Radon Abatement.[781] The title is predominantly an information and demonstration project. The stated goal of the title is that "the air within buildings in the United States should be as free

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[775] TSCA § 15, 15 U.S.C. § 2614 (1988); 40 C.F.R. § 763.97(a) (1989).
[776] *Id.* § 16(b), 15 U.S.C. § 2615 (b); 40 C.F.R. § 763.97(c).
[777] *Id.* § 208(b), 15 U.S.C. § 2648; 40 C.F.R. § 763.97(e).
[778] *Id.* § 207(d), 15 U.S.C. § 2674; 40 C.F.R. § 763.97(e).
[779] *Id.* § 11, 15 U.S.C. § 2610; 40 C.F.R. § 763.97(f).
[780] Miss. Code Ann. § 37-138-27 (Supp. 1990).
[781] TSCA § 301-311, 15 U.S.C. §§ 2661-2671 (1988).

of radon as the ambient air outside of the buildings."[782]

Demonstration projects called for under the title include model construction standards and techniques,[783] radon mitigation methods,[784] and technical and grant assistance to state radon programs. The generation and dissemination of information and training[785] of the public is called for and encouraged.[786] Provisions also call for EPA studies of radon in public buildings[787] and schools.[788]

CLEAN WATER ACT

The Federal Water Pollution Control Act of 1971[789] was passed to protect and manage the quality of "navigable waters of the United States."[790] The Act was amended and renamed the Clean Water Act in 1977.[791] The 1977 amendments changed the regulatory focus of the Act towards the control of "toxic pollutants."[792] Although there are a number of other provisions in the

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[782] *Id.* § 301, 15 U.S.C. § 2661.

[783] *Id.* § 304, 15 U.S.C. § 2664.

[784] *Id.* § 305(a)(6), 15 U.S.C. § 2665(a)(6).

[785] *Id.* §§ 305, 306, 15 U.S.C. §§ 2665, 2666.

[786] *Id.* § 303, 15 U.S.C. § 2663.

[787] *Id.* § 309, 15 U.S.C. § 2669.

[788] *Id.* § 307, 15 U.S.C. § 2667.

[789] 33 U.S.C. §§ 1251-1376 (1988).

[790] *See* Clean Water Act (CWA) § 502(7), 33 U.S.C. § 1362(7) (1988) ("Navigable waters" are defined to mean "the waters of the United States, including the territorial seas."); *see also* 40 C.F.R. § 122.1(6) (1981) ("waters of the United States" broadly defined).

[791] Pub. L. No. 95-217, 91 Stat. 1567 (1977).

[792] "Toxic pollutant" is defined as:

> [T]hose pollutants, or combinations of pollutants, including disease-causing agents, which after discharge and upon exposure, ingestion, inhalation or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will, on the basis of information available to the Administrator [of EPA], cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunctions in reproduction) or physical deformations, in such organisms or their offspring.

CWA § 502(13), 33 U.S.C. § 1362(13) (1988). A "pollutant" is defined under the CWA as "dredged, spoiled, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical waste, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water," with certain exceptions. CWA § 502(6), 33 U.S.C. § 1362(6)

Clean Water Act, this presentation will focus on the following major components: (1) a system of technology-based effluent limitations which establish treatment standards to be achieved by industrial dischargers and "publicly owned treatment works" (POTWs);[793] (2) establishment of federal water quality standards (WQSs);[794] (3) development of the National Pollutant Discharge Elimination System (NPDES) as a permit program for the regulation of the "discharge of pollutants"[795] from "point sources"[796] to navigable waters;[797] (5) control of oil and hazardous substance releases;[798] (6) a permit program for the regulation of discharges of dredged or fill material into navigable waters at specified disposal sites;[799] and (7) special circumstances such as

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(1988).

[793] CWA §§ 301, 304, 306-307, 33 U.S.C. §§ 1311, 1314, 1316-1317 (1988). A POTW is defined as:

> a treatment works . . . which is owned by a State or municipality . . . This definition includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial waste of a liquid nature. It also includes sewers, pipes and other conveyances only if they convey waste water to a POTW Treatment Plant. The term also means the municipality . . . which has jurisdiction over the Indirect Discharges to and the discharges from such a treatment works.

40 C.F.R. § 403.3(o) (1989). In 1972, the CWA established a grant program to aid local governments construction of POTW's. 33 U.S.C. §§ 1281-1299 (1988). This initially allowed for federal payment of 75% of the construction cost and was viewed as essential in order for local communities to achieve compliance with the newly-established effluent limitations. CWA § 202(a)(1), 33 U.S.C. § 1282(a)(1) (1988). The federal contribution was lowered to 55% in 1984, 33 U.S.C. § 1282 (a)(1) (1988), and in 1990 the program becomes a rotating loan program. Pub. L. No. 100-4, 101 Stat. 15 (1987).

[794] CWA §§ 301-304, 33 U.S.C. §§ 1311-1314 (1988).

[795] "Discharge of pollutants" is defined as "(A) any addition of any pollutant to navigable waters from any point source, (B) any addition of any pollutant to the waters of the contiguous zone or the ocean from any point source other than a vessel or other floating craft." CWA § 502(12), 33 U.S.C. § 1362(12) (1988).

[798] "Point source" is defined as:

> [A]ny discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include agricultural storm water discharges and return flows from irrigated agriculture.

CWA § 502(14), 33 U.S.C. § 1362(14) (1988).

[797] *Id.* § 402, 33 U.S.C. § 1342.

[798] *Id.* § 311, 33 U.S.C. § 1321.

[799] *Id.* § 404, 33 U.S.C. § 1344.

non-point souce[800] and storm water discharge.[801]

I. Effluent Limitations

A. NRDC v. Train *Consent Decree*

Although the Clean Water Act provides a broad definition of "pollutants" over which it has jurisdiction, the EPA initially focused on the regulation of high-volume "conventional" pollutants[802] when it developed effluent limitations required by CWA to be established for industry-specific categories of point sources.[803] The EPA's emphasis on conventional pollutants to the detriment of toxic pollutants led the Natural Resource Defense Council (NRDC), an environmental organization, to bring a lawsuit against the Environmental Protection Agency to require the EPA to develop a toxic pollutant program.[804] The case resulted in a settlement decree between the EPA and the NRDC, which formulated a toxic pollutant control program. The program included the identification of sixty-five categories of "priority pollutants," including 129 chemical substances, to be regulated by the EPA; the establishment of thirty-four industry categories, including over 700 subcategories, which were to be the primary focus of the EPA's regulatory program; and the installation by these industry categories of the "best available technology economically achievable" (BAT).[805] The settlement agreement has had a significant impact on the Clean Water Act since the key provisions of the settlement decree discussed above were incorporated into the 1977 amendments to the Clean Water Act.[806] The consent decree was amended in 1979[807] and

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[800] *Id.* § 319, 33 U.S.C. § 1329.

[801] *Id.* § 402, 33 U.S.C. § 1342.

[802] There are five designated "conventional pollutants": biochemical oxygen demand (BOD), total suspended solids (nonfilterable) (TSS), pH, fecal coliform and oil and grease. *Id.* § 304(a)(4), 33 U.S.C. § 1314(a)(4).

[803] *Id.* § 301(a)(4), (b), 33 U.S.C. § 1311(a)(4), (b).

[804] NRDC v. Train, 8 E.R.C. 2120 (1976), *modified*, 12 E.R.C. 1833 (D.D.C. 1979).

[805] *Id.* at 2124, 2129-36; *see* CWA § 301(2)(a), 33 U.S.C. § 1311(2)(a) (1988) (establishing best available technology economically achievable standard for toxic pollutant discharges).

[806] CWA §§ 301-307, 33 U.S.C. §§ 1311-1317 (1988).

[807] NRDC v. Train, 12 E.R.C. 1833 (D.D.C. 1979).

has continued to serve as a major force in directing the establishment of effluent limitations for all thirty-four classes of industries described in the consent decree and incorporated in EPA regulations promulgated under the Clean Water Act.[808]

B. Effluent Limitations for Direct Discharges

The Clean Water Act establishes effluent limitations for point sources that discharge directly into navigable waters, in contrast to be pretreatment standards for "indirect" dischargers who discharge into POTWs.[809] These direct dischargers are divided into "existing" sources[810] and "new" sources.[811]

1. Existing Sources

The existing source direct dischargers are required to comply with effluent limitations for three different categories of pollutants: the sixty-five categories of "priority pollutants"[812] and other toxic pollutants, "conventional pollutants,"[813] and "nonconventional, nontoxic" pollutants.[814] The Act requires applica-

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[808] *See* 40 C.F.R. §§ 401, 403, 405-415, 417-434, 436, 439-440, 443, 446-447, 454-455, 457-461, 463-469, 471 (industry-specific effluent standards). *See generally*, GOVERNMENTAL INSTS., INC., ENVIRONMENTAL LAW HANDBOOK 183-85 (10th Ed. 1989).

[809] *See* CWA § 307(b), 33 U.S.C. § 1317(b) (1988); 40 C.F.R. § 403 (1989) (EPA pretreatment standards).

[810] CWA § 301(b), 33 U.S.C. § 1311(b) (1988).

[811] *See* CWA § 306, 33 U.S.C. § 1316 (1988); 40 C.F.R. § 122.29 (1989) (standards for new sources and new dischargers). "New source" is defined as:

> [A]ny building, structure, facility, or installation from which there is or may be a 'discharge of pollutants,' the construction of which commenced: (a) After promulgation of standards of performance under section 306 of CWA which are applicable to such source, or (b) after proposal of standards of performance in accordance with section 306 of CWA which are applicable to such source, but only if the standards are promulgated in accordance with section 306 within 120 days of their proposal.

40 C.F.R. § 122.2 (1989).

[812] 40 C.F.R. § 401.15 (1989). These 65 categories may be subdivided into 129 toxic pollutants, including 31 volatiles, 11 acid compounds, 46 base/neutral compounds, 25 pesticides, 15 other toxic pollutants and total phenols, and asbestos. 40 C.F.R. § 122 app. D, tables II-IV (1989).

[813] *See id.* § 401.16 (consisting of biochemical oxygen demand (BOD), total suspended solids (TSS), pH, fecal coliform, and oil and grease).

[814] *See id.* § 122.21(m)(2) (consisting of ammonia, chlorine, color, iron and total phenols (4AAP)); *see also id.* § 122 app. D, table IV (listing conventional and nonconven-

tion of the "best available technology economically achievable" (BAT) for achieving compliance with the effluent limitations on toxic pollutants.[815] The EPA regulations described BAT as the "very best economically achievable performance of plants of various ages, sizes, processes, or other shared characteristics ."[816] Effluent limitations for aldrin/dieldrin; DDT, DDD and DDE; endrin; toxaphene; benzidine; and polychlorinated biphenyls (PCBs) are the ones the EPA has promulgated to date.[817] For conventional pollutants, the "best conventional pollution control technology" (BCT)[818] is required. For pollutants which are neither toxic nor conventional pollutants, the effluent limitations are based on BAT.[819]

2. New Source Dischargers

Under the Clean Water Act, new sources are subject to new source standards, which are presumably more strict than standards for existing sources.[820] The EPA was required to promulgate new source effluent standards, and any source constructed after the promulgation was subject to the new restrictions.[821] The Act lists twenty-seven categories of sources, identified by industrial grouping, for which the EPA must establish performance standards for both existing and new sources.[822] The specific new source standard for each category can be found in 40 C.F.R.

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tional pollutants).

[815] CWA § 301(2)(A), 33 U.S.C. § 1311(2)(A) (1988). BAT is more stringent than the "Best Practical Control Technology" (BPT), with which the existing sources had to comply prior to the compliance deadlines for BAT.

[818] 45 Fed. Reg. 68,328-333 (1980).

[817] 40 C.F.R. §§ 129.100-.105 (1989). The EPA has published recommended water quality criteria for these and a number of other toxic pollutants. 50 Fed. Reg. 30,784 (1985).

[818] 40 C.F.R. § 125.3(a)(2)(ii) (1989). The EPA has stated that "BCT requires that limitations for conventional pollutants be assessed in light of a new 'cost-reasonableness test' which involves a comparison of the costs and level of reduction of conventional pollutants from the discharge of publicly owned treatment works (POTW) to the cost and level of reduction of such pollutants from a class or category of industrial resources." 45 Fed. Reg. 68,328-334 (1980).

[819] 40 C.F.R. § 125.3(a)(2)(v) (1989).

[820] CWA § 306(6)(1)(B), 33 U.S.C. § 1316(6)(1)(B) (1988).

[821] *Id.* § 306(A)(2), (G)(1)(B), 33 U.S.C. § 1316(a)(2), (b)(1)(B).

[822] *Id.*

Parts 400 through 471, where they are listed according to the category of source.[823]

C. *Indirect Discharges to POTWs—Pretreatment Standards*

Industrial facilities that do not discharge directly into navigable waters must comply with pretreatment standards adopted pursuant to the Clean Water Act.[824] These pretreatment standards are intended to control pollutants that pass through or interfere with treatment processes and POTWs or which may contaminate sewage sludge.[825] These pretreatment standards consist of (1) general prohibitions and standards[826] and standards which have been developed for industrial users in specific industrial categories.[827]

D. *EPA Existing Source Effluent Limitations, New Source Performance Standards, and Pretreatment Standards*

The EPA has promulgated or proposed under 40 CFR §§ 402-471 effluent limitation guidelines for existing sources, standards of performance for new sources, and pretreatment standards for new and existing sources.[828] Point sources of discharges of pollutants are required to comply with these regulations, where applicable.[829]

E. *Secondary Treatment Standards for POTWs*

Section 301 of the Clean Water Act requires POTWs to have achieved effluent limitations based on secondary treatment.[830] These secondary treatment standards describe the minimum level of effluent quality attainable in terms of three pri-

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[823] 40 C.F.R. §§ 400-471 (1989).

[824] CWA § 307(b), 33 U.S.C. § 1317(b) (1988).

[825] 40 C.F.R. § 403.2 (1989).

[826] *Id.* § 403.5.

[827] *Id.* § 403.6.

[828] 40 C.F.R. § 401.10 (1989); *see* CWA §§ 301, 304(b)-(c), 306(b)-(c), 307(b)-(c), 316(b), 33 U.S.C. §§ 1311, 1314(b)-(c), 1316(b)-(c), 1317(b)-(c), 1326(b) (1988); (laws authorizing establishment of effluent limitation guidelines for existing sources, standards of performance for new sources, and pretreatment standards for new and existing sources).

[829] 40 C.F.R. § 401.10 (1989).

[830] *Id.* §[[133.102-.105.

mary parameters, the five day measure of biochemical oxygen demand (BOD), suspended solids (SS) and pH.[831] Section 304 of the Clean Water Act establishes that biological treatment facilities such as oxidation ponds, lagoons, ditches, and trickling filters, are deemed the equivalent of secondary treatment and must meet the effluent standards.[832]

II. Water Quality Standards (WQS)

A. Establishment of WQSs

The effluent limitations discussed above which established a minimum level of waste water treatment are specifically made subject to more stringent effluent limitations necessary to maintain water quality in specific navigable waters. The purpose is to "assure protection of public health, public water supplies, agricultural and industrial uses, and the protection and propagation of a balanced population of shellfish, fish and wildlife, and allow recreational activities in and on the water . . . ."[833] To implement these goals, section 303 of the Clean Water Act sets forth procedures for the establishment of state water quality standards applicable to the waters within each state.[834] To assist the states with the preparation of WQSs and in accordance with the requirement of the statute, the EPA published water quality criteria "reflecting the latest scientific knowledge" on the effects, concentration, and dispersal of pollutants; and information on factors necessary to restore and maintain water quality objectives.[835]

If the EPA approved the standards adopted by the state, which it was required to do if they were consistent with the applicable requirements of the CWA, the state standards became

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[831] *Id.* § 133.102.

[832] CWA § 304(d)(4), 33 U.S.C. § 1314(d)(4) (1988).

[833] *Id.* § 302(a), 33 U.S.C. § 1312(a) (1988); *see also id.* § 301(b)(1)(C), 33 U.S.C. § 1311(b)(1)(C) (requiring more stringent effluent limitations necessary to meet applicable state or federal water quality standards, treatment standards, and schedules of compliance).

[834] *Id.* § 303(a), 33 U.S.C. § 1313(a).

[835] 45 Fed. Reg. 79,318 (1980); *see* CWA § 304(a)(1)-(2), 33 U.S.C. § 1314(a)(1)-(2) (requiring EPA to promulgate water quality criteria and other information).

the WQSs for that state.[836] If the EPA determined that the state failed to submit water quality standards in a timely fashion or that the WQSs submitted by the state were not consistent with the statutory requirements, the state was provided an opportunity to make the necessary changes to make the standard consistent. After such time, the EPA was required to promulgate WQSs for the state.[837]

The EPA regulations for state water quality standards include three primary elements: (1) the designation of the water uses the standards are designed to protect;[838] (2) the adoption of numerical and qualitative criteria necessary to protect the designated uses, particularly with regard to toxic pollutants;[839] and (3) an anti-degradation policy which will protect and maintain the designated uses.[840] On July 17, 1985, the Commission on Environmental Quality (formerly the Department of Natural Resources) promulgated water quality standards for the state pursuant to these EPA regulations.[841] These water quality standards were amended March 12, 1990, by the Commission to delineate a number of water quality criteria for toxic pollutants, consistent with EPA-recommended national water quality criteria.[842]

B. Toxic Pollutant Individual Control Strategies

The Clear Water Act requires each state to identify the waters within its boundaries for which the effluent limitations are not sufficiently stringent to attain the applicable water quality

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[836] CWA § 303(a)(3)(A)-(B), 33 U.S.C. § 1313(a)(3)(A)-(B) (1988).

[837] *Id.* § 303(a)(3)(C), (b)(1)-(2), 33 U.S.C. § 1313(a)(3)(c), (b)(1)-(2).

[838] 40 C.F.R. § 131.10 (1989). Several factors are to be taken into account, including the use of the water for public water supply, the protection of fish and wildlife, recreational purposes, and agricultural, industrial and other uses. *Id.*

[839] *Id.* § 131.11.

[840] *Id.* § 131.12.

[841] MISS. DEP'T OF NATURAL RESOURCES, BUREAU OF POLLUTION CONTROL, STATE OF MISSISSIPPI WATER QUALITY CRITERIA FOR INTRASTATE, INTERSTATE, AND COASTAL WATERS (July 17, 1985).

[842] Official Minutes, Miss. Comm. on Environmental Quality, March 22-23, 1990 at 6; *see also* 50 Fed. Reg. 30,784 (federal recommended national water quality criteria). These are also published in an EPA document entitled *Quality Criteria for Water*, popularly known as the "Gold Book."

standards.[843] The state must then establish a priority ranking for such waters, taking into account the severity of the pollution and the uses to be made of the waters.[844] Of even more importance, the act also requires states to submit to the EPA detailed information regarding the waters that are within the state that do not meet water quality standards for toxic pollutants.[845]

By February 4, 1989, the states were required to submit to the EPA the list of identified water bodies, together with the affected point sources and individual control strategies.[846] If the EPA approved the strategy, then the affected dischargers have until June, 1992, to comply with the individual control strategies approved by the EPA.[847] If the EPA disapproved the control strategy, or the state failed to submit it, the EPA had until June, 1990, to promulgate control strategies for discharges in the state.[848] In Mississippi, the Department of Environmental Quality submitted the required toxic pollutant individual control strategy data to the EPA, which subsequently approved it except for two facilities which were added after DEQs submittal at EPA record request.[849]

III. NPDES Permit Program

A. Scope of Program

The primary mechanism for implementing the effluent limi-

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[843] CWA § 303(d)(1)(A)-(B), 33 U.S.C. § 1313 (d)(1)(A)-(B)(1988).

[844] *Id.* This section also requires the state to identify the waters that require additional controls on thermal discharges, the total maximum daily load for pollutants necessary to achieve the applicable water quality standard and the total maximum daily thermal load necessary to protect fish and wildlife. *Id.* § 303(d)(1)(B)-(D), 33 U.S.C. § 1313(d)(1)(B)-(D).

[845] *Id.*§ 304(*l*)(1)(A)-(B), 33 U.S.C. § 1314(*l*)(1)(A)-(B). Section 304(*l*) also requires states to submit specific point sources that are violating toxic pollutant water quality standards, the amount of the toxic pollutants discharged by each source for each segment of water bodies on the list, and the strategy for reducing the discharge of toxic pollutants from the identified point sources in order to achieve the water quality standards. *Id.* § 304(*l*)(1)(C), (D), 33 U.S.C. § 1314(*l*)(1)(C), (D).

[846] *Id.* § 304(*l*)(1), 33 U.S.C. § 1314(*l*)(1). The EPA had until June, 1989, to approve or disapprove the submissions. *Id.* § 304(*l*)(2), 33 U.S.C. § 1314(*l*)(2).

[847] *Id.* § 304(*l*)(1)(D), 33 U.S.C. § 1314(*l*)(1)(D).

[848] *Id.* § 304(*l*)(3), 33 U.S.C. § 1314(*l*)(3).

[849] Letter from Greer C. Tidwell, U.S. EPA Region IV Regional Administrator to J.I. Palmer, Executive Director Miss. Dep't of National Resources (June 2, 1989).

tations and water quality standards discussed in Sections I and II is the National Pollutant Discharge Elimination System (NPDES) permit program authorized by section 402 of the Clean Water Act.[850] The scope of the NPDES program, as set forth in EPA regulations for the program, is to permit the discharge of all pollutants from any point source into the waters of the United States.[851] Exclusions from the NPDES program include discharges to POTWs by indirect dischargers, discharges of dredged or fill material into waters of the United States regulated under section 404 of the Clean Water Act, discharges of pollutants from nonpoint-source agricultural and silvicultural activities, and discharges into privately owned treatment works.[852]

B. Permit Conditions

The EPA regulations contain a number of conditions that must be included in NPDES permits.[853] They include the conditions applicable to all permits;[854] schedules of compliance;[855] recording and reporting of monitoring results,[856] disposal of pollutants into wells and POTWs and by land application[857] and duration, which is typically five years.[858] The technology-based treatment requirements representing the minimum level of control that must be imposed in an NPDES permit are set forth in the regulations.[859] These regulations establish effluent limitations for POTWs consisting of secondary treatment and best

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[850] 33 U.S.C. § 1342 (1988).

[851] 40 C.F.R. § 122.1(b) (1989).

[852] *Id.* § 122.3. Other exclusions include discharge of sewage, effluent and other wastes from vessels, and certain oil and hazardous substance discharges in compliance with EPA regulations. *Id.*

[853] *Id.* §§ 122.41-.50.

[854] *See id.* § 122.41 (conditions applicable to every NPDES permit include duty to mitigate, instructions for proper operation and maintenance, monitoring and record requirements, reporting requirements, and others).

[855] *Id.* § 122.47.

[856] *Id.* § 122.48.

[857] *Id.* § 122.50.

[858] *Id.* § 122.46.

[859] *Id.* § 125.3.

practical waste treatment technology.[860] For dischargers other than POTWs and new sources (which must comply with new source performance standards), the best practicable control technology currently available (BPT) is required.[861] The Act also requires more stringent technology-based standards depending on the type of pollutant. These additional pollutant-specific technologies are (1) for conventional pollutants, the best conventional pollutant control technology (BCT), (2) for toxic pollutants, the best available technology economically achievable (BAT) and (3) for nonconventional, nontoxic pollutants, the best available technology economically achievable.[862]

C. Delegation of NPDES Program to States

Section 402 provides for the delegation of the NPDES permit program to the states.[863] The Act requires the EPA to approve each submitted program unless it determines that the program does not provide state authorities adequate authority to administer the program properly according to federal standards.[864] The EPA regulations set forth in more detail the required elements of a state program necessary to satisfy delegation requirements.[865] These elements include the various requirements for permitting,[866] compliance evaluation programs,[867] enforcement authority,[868] and control of disposal of pollutants into wells.[869] The EPA has approved part of Mississippi's NPDES program as being sufficient for delegation of the federal program.[870]

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[860] *Id.* § 125.3(a)(1).
[861] *Id.* § 125.3(a)(2).
[862] *Id.* § 125.3(a)(2)(ii)-(v).
[863] CWA § 402(b), 33 U.S.C. § 1342(b) (1988).
[864] *Id.* § 402(b)(1)-(9), 33 U.S.C. § 1342(b)(1)-(9) (1988).
[865] 40 C.F.R. § 123.21-.29 (1989).
[866] *Id.* § 123.25.
[867] *Id.* § 123.26.
[868] *Id.* § 123.27.
[869] *Id.* § 123.28.
[870] 55 Fed. Reg. 5660 (1990). The EPA approved the state NPDES permit program in 1974, consented to state regulation of federal facilities in 1983, and approved the state pretreatment program in 1982. *Id.* The EPA has not, however, approved Mississippi's general NPDES permit program. *Id.*

The Mississippi Commission on Environmental Quality has promulgated regulations for the NPDES program[871] pursuant to the Mississippi Air and Water Pollution Control Law.[872] NPDES permits are granted by the Environmental Quality Permit Board.[873] Under the Air and Water Pollution Control Law, violators of NPDES permits may face civil penalties of up to $25,000 per day per violation, as well as injunctive requirements and payment of natural resource damages.[874] The EPA Region IV and DEQ have executed an enforcement agreement which specifies the relative obligations of the DEQ and the EPA regarding the NPDES program.[875]

IV. Oil and Hazardous Substance Spills

A. Requirements Common to Oil and Hazardous Substances

Section 311 of the Clean Water Act prohibits the discharge of oil or hazardous substances[876] into or upon the navigable waters of the United States, adjoining shorelines, or into or upon the waters of the contiguous zone in such quantities as may be harmful.[877] Any person in charge of a vessel or an onshore facility is required, as soon as he has knowledge of any discharge of oil or hazardous substance that may be harmful, to immediately notify the appropriate agency of the United States government.[878] Failure to notify may result in a penalty of up to $10,000, imprisonment of up to one year, or both.[879] Penalties for violating the prohibition on discharges of harmful quantities

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[871] Miss. Dep't of Natural Resources, Bureau of Pollution Control, Wastewater Permit Regulations for National Pollutant Discharge Elimination System (NPDES) Underground Injection Control (UIC) and State Operating Permits (amended October 28, 1987).

[872] Mississippi Air and Water Pollution Control Law, Miss. Code Ann. §§ 49-17-17(i) to -29(3) (Supp. 1990).

[873] *Id.* § 49-17-29.

[874] *Id.* § 49-17-43.

[875] NPDES Enforcement Agreement Between the State of Mississippi and EPA, Region IV (October 23, 1989).

[876] *See* 40 C.F.R. § 116.4 (1989) (list of hazardous substances applicable to section 311 of the Act).

[877] CWA § 311, 33 U.S.C. § 1321 (1982 & Supp. V 1987).

[878] CWA § 311(b)(5), 33 U.S.C. § 1321(b)(5) (1982).

[879] *Id.*

of oil or hazardous substances may subject the violator to a civil penalty of up to $5,000 for each violation.[880] The EPA may also commence a civil action against a violator which may result in a penalty of up to $50,000.[881] However, if the EPA proves "willful negligence or willful misconduct," the violator may be assessed penalties up to $250,000 for each violation.[882] In addition, violators are subject to penalties under Mississippi law of up to $25,000 per day per violation.[883]

Whenever any oil or hazardous substance is discharged, or there is a substantial threat of a discharge, the EPA is authorized to remove or arrange for the removal of the oil or hazardous substances unless it determines that the removal can be adequately accomplished by the owner of the vessel or facility which discharged the oil.[884] The EPA is also required to publish a National Contingency Plan (NCP), which will provide for coordinated action to minimize the damage from oil and hazardous substance discharges.[885] The NCP, which was also prepared pursuant to CERCLA and is applicable to CERCLA hazardous substance response actions, was first published in 1985 and has recently been amended.[886]

The owner or operator of an onshore facility is strictly liable for the actual cost incurred by the United States for the removal of the oil or hazardous substance up to a limit of $50 million.[887] Where it can be shown that the discharge was the result of willful negligence or willful misconduct, the owner or operator may be liable for the full amount of the removal of cost.[888] This liability has been determined to be the same strict liability as that applied under the Comprehensive Environmental Response,

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[880] CWA § 311(b)(6)(A), 33 U.S.C. § 1321(b)(6)(A) (1982 & Supp. V 1987).

[881] CWA § 311(b)(6)(B), 33 U.S.C. § 1321(b)(6)(B) (1982).

[882] *Id.*

[883] MISS. CODE ANN. § 49-17-43 (Supp. 1990).

[884] CWA § 311(c)(1), 33 U.S.C. § 1321(c)(1) (1988).

[885] *Id.* § 311(c)(2), 33 U.S.C. § 1321(c)(2).

[886] 40 C.F.R. § 300 (1989) (amended by 55 Fed. Reg. 8666-8865 (1990)).

[887] CWA § 311(f)(2), 23 U.S.C. § 1321(f)(2) (1988).

[888] *Id.* Owners and operators of vessels and of offshore facilities are also liable to the United States government for cleanup costs. *Id.* § 311(f)(1), (3), 33 U.S.C. § 1321(f)(1), (3).

Compensation and Liability Act (CERCLA).[889] The cost of removal for which an owner or operator is liable includes the cost incurred by the federal government or state government in the restoration of the natural resources damaged as a result of the oil or hazardous substances discharge.[890] A revolving fund has been established in the United States Treasury in the amount of $35 million to permit the EPA to conduct removal actions.[891]

B. Specific Regulatory Requirements for Oil Spills

The EPA regulations state that discharges of oil are harmful to the public health if they violate the applicable water quality standards or cause certain physically observable contamination of the water surface or shores.[892] As in section 311 of the Act, these harmful discharges of oil are prohibited.[893] Furthermore, the regulations contain a notice provision which requires that those with knowledge of an oil discharge notify the National Response Center.[894] Under other EPA regulations, owners or operators of onshore and offshore facilities that have previously discharged or could reasonably be expected to discharge oil in the future must prepare a Spill Prevention Control and Countermeasure Plan (SPCC Plan).[895] The regulations set forth detailed guidelines for the preparation and implementation of the SPCC Plan.[896]

C. Specific Regulations for Hazardous Substance Spills

EPA regulations define harmful quantities of hazardous substances as "reportable quantities," which range from one pound to five thousand pounds[897] of approximately 300 hazard-

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[889] *Id.* § 311(b), 33 U.S.C. § 1321(f).
[890] *Id.* § 311(f)(5), 33 U.S.C. § 1321(f)(5).
[891] *Id.* § 311(k)(1), 33 U.S.C. § 1321(k)(1).
[892] 40 C.F.R. § 110.3 (1989).
[893] *Id.* § 110.6.
[894] *Id.* § 110.10.
[895] *Id.* § 112.3.
[896] *Id.* § 112.7.
[897] The reportable quantities are referenced with code letters x, a, b, c and d, associated with reportable quantities of 1, 10, 100, 1000 and 5000 pounds, respectively. *Id.* § 117.3, Table 117.3.

ous substances.[898] As with the discharge of oil, any person in charge of a vessel or an onshore or offshore facility must, as soon as he knows of a hazardous substance discharge in quantities above the reportable quantity in any twenty-four hour period, immediately notify the National Response Center in Washington, D.C.[899] Failure to provide such notification may subject the owner or operator to criminal sanctions of up to $10,000, imprisonment for up to one year, or both.[900] Additionally, the statute and regulations provide that the owner or operator discharging more than the reportable quantity of a hazardous substance within a twenty-four hour period may be held accountable for the actual removal costs.[901] Excluded from the application of the EPA's hazardous substance reporting requirements are discharges performed in compliance with an NPDES permit.[902]

D. Coast Guard Regulations

The Department of Transportation regulations for the Coast Guard also govern the discharges of oil and hazardous substances.[903] Notice to the National Response Center is required for discharges of oil or hazardous substances in harmful quantities by the owner or operator of the vessel or facility.[904] The regulations also specify the methods and procedures for the removal of discharged oil[905] and the administration of the pollution fund used to pay for discharge cleanup costs.[906]

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[898] *Id.* § 117.3. Note that this regulation states that each substance in Table 117.3 that is listed in Table 302.4, the CERCLA hazardous substance list, is assigned the reportable quantity listed in Table 302.4 for that hazardous substance. *Id.*

[899] *Id.* § 117.21.

[900] *Id.* § 311(b)(5), 33 U.S.C. § 1321(b)(5).

[901] *Id.* § 311(f), 33 U.S.C. § 1321(f).

[902] 40 C.F.R. § 117.12 (1989).

[903] *See* 33 C.F.R. § 153 (1989) (provisions for notice and removal of discharged oil); *id.* § 154 (oil pollution prevention regulations for marine oil transfer facilities); *id.* § 155 (oil vessel design and operations regulations); *id.* § 156 (oil transfer operations procedures); *id.* § 157 (restrictions and procedures for vessels carrying oil in bulk); *id.* § 158 (criteria for oil reception facilities).

[904] *Id.* § 153.203.

[905] *Id.* § 153.305.

[906] *Id.* §§ 153.401-.417.

V. Permits for Discharge of Dredged or Fill Material

Section 404 of the Clean Water Act authorizes the United States Army Corps of Engineers to issue permits to discharge dredged or fill material into navigable waters at disposal sites, including areas classified as wetlands.[907] Section 404(b) provides that permits for each disposal site will be based on the application of guidelines developed by the EPA in conjunction with the Corps of Engineers.[908] The Act gives the EPA veto power over the specification of any defined area as a disposal site for dredged fill material.[909] The Clean Water Act, in essence, creates bifurcated enforcement authority, since the EPA can enforce the Act against those who discharge dredge or fill material without a permit and the Corps of Engineers can proceed against dischargers who violate the terms of their permit.[910] Because of the dual authority over wetland protection, the jurisdictional line between the EPA and the Corps of Engineers is often blurred. In general terms, the Corps is responsible for the day-to-day operation of the permit program, while the EPA exercises a review and policy-making function.[911] This should not imply that the two agencies always operate harmoniously, because conflicts are unavoidable in some circumstances. In fact, it is likely that conflicts between the Corps of Engineers and the EPA will increase since the geographic area of wetlands is expanding.[912]

A. Scope of Wetlands Jurisdiction

The scope of the Clean Water Act includes "navigable waters," which has been defined to mean all "waters of the United States."[913] This definition includes "wetlands." Corps regulations define wetlands as "those areas that are inundated or saturated by surface or ground water at a frequency and duration

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[907] CWA § 404(a), 33 U.S.C. § 1344(a) (1988).

[908] *Id.* § 404(b), 33 U.S.C. § 1344(b).

[909] *Id.* § 404(c), 33 U.S.C. § 1344(c).

[910] W. Want, Law of Wetlands Regulation § 3.01 (1989).

[911] *Id.*

[912] According to the Corps' Vicksburg District, the Mississippi Delta now contains about 2.9 million acres of wetlands.

[913] CWA § 502(7), 33 U.S.C. § 1362(7) (1988).

sufficient to support, and that under normal circumstances, do support, a prevalence of vegetation, typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas."[914]

Section 301 of the Clean Water Act, as stated earlier, prohibits all discharges of pollutants from a point source into navigable waters without a permit.[915] Section 402 of the Act authorizes the EPA to grant NPDES discharge permits.[916] Section 404 provides an exception to the EPA's permit authority by granting the Corps of Engineers the authority to issue discharge permits for dredged and fill materials. The EPA and Corps of Engineers, as might be expected, have conflicting views on the meaning of "dredged and fill material."[917] The Corps of Engineers has taken the position that only discharges changing a body of water by filling it in or altering the bottom elevation can be identified as fill material subject to section 404 permitting.[918] The EPA, on the other hand, argues that all discharges of material, including waste and regardless of intent, are subject to section 404 permitting.[919] Fortunately the EPA and the Corps of Engineers have entered into a Memorandum of Agreement which establishes a list of criteria to be applied when determining whether a given discharge is subject to an NPDES permit under Section 402 or a dredged and fill material permit under Section 404.[920]

Section 404(f)(1) provides for six exemptions from section 404 jurisdiction.[921] The primary exemption allows the discharging of dredged or fill material for "normal farming, silviculture and ranching activities."[922] The exemption is unavailable, how-

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[914] 33 C.F.R. § 328.3(b) (1989). Wetlands separated from other waters man-made dikes or barriers, natural river burms, beach dunes, and similar barriers are defined as adjacent wetlands. *Id.* § 328.3(c).

[915] CWA § 301, 33 U.S.C. § 1311 (1988).

[916] 33 U.S.C. § 1342 (1988).

[917] W. WANT, *supra* note 905, § 4.06[1]- n.63.

[918] *Id.*

[919] *Id.*

[920] Memorandum of Agreement on Solid Waste, 51 Fed. Reg. 8871 (1986).

[921] CWA § 404(f)(1), 33 U.S.C. § 1344(f)(1) (1988).

[922] *Id.* § 404(f)(1)(A), 33 U.S.C. § 1344(f)(1)(A). The other exemptions are (1) maintenance of "currently serviceable structures" such as dikes, dams and levees; (2) construction or maintenance of farm or stock pines or irrigation ditches; (3) construction of temporary sedimentation basins on a construction; (4) construction and maintenance of

ever, if the activity has as its purpose "bringing an area of the navigable waters into a use to which it was not previously subject, where the flow or circulation of navigable waters may be impaired or the reach of such waters be reduced . . . ."[923]

B. Section 404 Permit Process

1. Corps of Engineers Permit Consideration

After an application has been submitted to the Corps and after public notice and comment,[924] the Corps first evaluates the application on the basis of whether it involves functioning wetlands. For jurisdictional areas not considered to be functioning wetlands, there exists a presumption in favor of granting a permit unless the Corps district engineer determines that it would be contrary to the public interest.[925] For important wetlands, Corps regulations have the opposite presumption: no permit which materially alters important wetlands will be granted unless the Corps district engineer determines that the benefits of the proposed changes outweigh the deleterious effects on the wetlands.[926]

2. EPA Guidelines

As stated earlier, the Act requires the Corps to apply the guidelines developed in tandem with the EPA in exercising its permit authority.[927] The guidelines establish environmental criteria to be used by the Corps in evaluating applications for dredged or fill material discharge permits.[928] The Corps, how-

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farm, forest, or temporary mining roads; and (5) activities regarding a state-approved waste treatment program under 33 U.S.C. § 1288(b)(4) (1988). *Id.* at (b)-(f).

[923] CWA § 404(f)(2), 33 U.S.C. § 1344(f)(2) (1988).

[924] 33 C.F.R. § 325.2(a) (1989).

[925] *Id.* § 320.4(a). The EPA regulations, on the other hand, state that a permit should not be approved "unless it can be demonstrated such discharge would not have an unacceptable adverse impact." *Id.* § 230.1(c). Because the EPA presumption above against a permit is required by statute and the Corps' is not, some have argued that the EPA guideline may overrule the Corps on this point. W. WANT, *supra* note 905, § 6.04(1) n.32.

[926] 33 C.F.R. § 320.4(b)(4) (1989).

[927] CWA § 404(b)(1), 33 U.S.C. § 1344(b)(1) (1988).

[928] 40 C.F.R. § 230.2(a) (1989).

ever, applies its own interpretation of the EPA guidelines rather than accepting the EPA's interpretation.[929]

An important feature of the EPA guidelines is their presumption against issuing a permit to fill special aquatic sites, such as sanctuaries, refuges, mud flats, and vegetated shallows, by prohibiting the discharge of dredged or fill material into waters "if there is a practical alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem."[930] In addition, the guidelines prohibit the issuance of section 404 permits "which will cause or contribute to significant degradation," including adverse effects on human health and the aquatic ecosystem.[931]

3. Other Factors

In addition to the EPA guidelines, the Corps must also determine whether the project for which the application is made could have "significant impact on the quality of the human environment" which would trigger an environmental impact statement under the National Environmental Policy Act.[932] The Corps also gives consideration to (1) general environmental effects, including the effects on fish and wildlife;[933] (2) federal state and local requirements and decisions by other agencies with regard to matters within their authority;[934] (3) mitigation of damage;[935] (4) comments of the EPA and the Fish and Wildlife

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[929] 33 C.F.R. § 320.4(b)(4) (1989).

[930] 40 C.F.R. § 230.10(a) (1989).

[931] *Id.* § 230.10(c).

[932] 42 U.S.C. §§ 4321-4370 (1988); *see* 33 C.F.R. § 230 (1989) (regulations for Corp implementation of NEPA procedures).

[933] 33 C.F.R. § 320.4(a)-(e) (1989).

[934] *Id.* § 320.4(j).

[935] *Id.* §§ 235.4(a), 320.4(r). Mitigation involves taking steps to avoid unnecessary damage to the environment and replacing or compensating for any damage which does occur. W. WANT, *supra* note 905, § 6.10[1]. Once again, the EPA and the Corps of Engineers have disagreed and grappled over the extent to which mitigation should play a role in the permit process. *Id.* The Corps of Engineers argues that mitigation should be taken into account on the front end of the negotiations so that projects not meeting the criteria for a permit would be allowed a permit because of the presence of mitigating circumstances. *Id.* The EPA, on the other hand, believes that mitigation should not be a factor in the granting of a permit. *Id.* Instead, only those projects satisfying the legal requirements should be permitted. *Id.* Mitigation would then serve to soften the harmful effects

Service;[936] and (5) consideration of other federal and state laws applicable to or necessary for a permit.[937]

C. *EPA Wetlands Determination and Veto Authority*

In the past, the Corps of Engineers administered the section 404 permit program and did most of the inspection and enforcement for illegal activities. In recent times, however, the EPA has used its authority much more frequently to make wetland determinations, to take independent enforcement actions and to veto permits issued by the Corps.[938]

Conflict arose between the EPA and the Corps regarding the EPA's authority to make wetlands determinations in the controversial wetlands decision, *Avoyelles Sportsmen's League, Inc. v. Marsh*.[939] During the course of that case, both the EPA and the Corps of Engineers independently made wetlands determinations on the land at issue.[940] Because the determinations were so different, a dispute arose as to which agency had the ultimate authority to make wetlands determinations and to present the United States' position on the extent of wetlands within the subject tract.[941] As a result of the confusion, the United States Attorney General, Benjamin Civiletti, issued an opinion stating that the EPA had the ultimate authority for wetlands jurisdiction determinations.[942] Subject to the Attorney General's opinion, the EPA and the Corps entered into a Memorandum of

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of the action. *Id.* For a more detailed discussion of the role of mitigation, see MEMORANDUM OF AGREEMENT BETWEEN THE EPA AND THE DEP'T OF THE ARMY CONCERNING THE DETERMINATION OF MITIGATION UNDER THE CLEAN WATER ACT SECTION 404(B)(1) GUIDELINES. (2/6/90).

[936] *See* Fish and Wildlife Coordination Act § 2, 16 U.S.C. § 662 (1988) (requires coordination and consultation with Fish and Wildlife Service before any alteration of navigable waters); *see also* 33 C.F.R. § 320.4 (c) (1989) (Corps of Engineers regulation mandating consultation with Fish and Wildlife Service).

[937] *See* 33 C.F.R. § 320.4(d) (1989) (state water quality certification under Clean Water Act); *id.* § 320.3(b), .4(h) (state coastal zone management program under Coastal Zone Management Act); *id.* § 330.5(b)(9) (National Historic Preservation Act review); *id* § 330.5(b)(3) (Endangered Species Act review).

[938] W. WANT, *supra* note 905, at § 7.01.

[939] 715 F.2d 897 (5th Cir. 1983).

[940] *Marsh*, 715 F.2d at 902.

[941] W. WANT, *supra* note 905, at § 7.02.

[942] 43 Op. Att'y Gen. 15 (1979).

Agreement (MOA) which confirmed the EPA's primary role in making the final wetlands determination.[943] This MOA was subsequently revised on January 19, 1989.[944] Under the revised MOA, the EPA, not the Corps, has the authority to designate an area as a special case and then make the jurisdictional determination.[945] Under the revised MOA, the Corps still makes the routine wetlands determinations; and if the EPA has not designated an area as a special case, the Corps can make the determination without prior approval from the EPA.[946] Once the Corps' determination becomes final, it cannot be overruled by the EPA.[947] The revised MOA is also applicable to determinations of exemptions from regulation under section 404(l).[948] The EPA and the Corps have executed a separate MOA concerning federal enforcement of the section 404 program, which states that the geographic determination for a specific enforcement action will be made by the agency that is investigating and in control of the case.[949]

Section 404(c) of the Clean Water Act sets forth the EPA's veto authority as the right to "prohibit the specification . . . of any defined area as a disposal site . . . whenever [EPA] determines, after notice and opportunity for public hearings, that the discharge of such materials into such area will have an unacceptable adverse effect" on the environment.[950] The precise nature of the EPA veto authority was analyzed in *Newport Galleria Group v. Deland*.[951] In that case, certain developers wanted to build a shopping center on land containing some wetlands.[952]

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[943] 45 Fed. Reg. 45,018 (1980).

[944] Memorandum of Agreement Between the Department of the Army and the Environmental Protection Agency Concerning the Determination of the Geographic Jurisdiction of the Section 404 Program and the Application of the Exemptions under Section 404(f) of the Clean Water Act. (January 19, 1989).

[945] Revised MOA at III.

[946] Revised MOA at IV(C)(2).

[947] Revised MOA at VI(A).

[948] Revised MOA at II.

[949] Memorandum of Agreement between the Department of the Army and the Environmental Protection Agency concerning federal enforcement for the Section 404 program of the Clean Water Act, at Section II(B) (January 19, 1989).

[950] CWA § 404(c), 33 U.S.C. § 1344(c) (1988).

[951] 618 F. Supp. 1179 (D. D.C. 1985).

[952] *Deland*, 618 F. Supp. at 1180.

The Corps of Engineers approved the permit with certain conditions, but the EPA Regional Administrator notified the Corps and the parties that he was initiating veto proceedings.[953] The plaintiff thereafter sued to enjoin the veto proceedings.[954] The court held, first, that the statute granted the EPA wide latitude in determining when to initiate veto proceedings.[955] Because the EPA had a good faith belief that the issuance of a permit might result in significant and unacceptable harm, the court upheld the agency's actions.[956] Finally, the court held that the mere initiation of veto proceedings was not a "final" action and therefore deprived the court of subject matter jurisdiction.[957]

D. State Programs

The Clean Water Act also permits a state to obtain approval from the EPA for the administration of its own permit program for the discharge of dredge and fill material.[958] Although Mississippi has not been delegated section 404 authority from the Corps, it does administer a dredge and fill permit program in the state's coastal zone under the state Coastal Wetlands Protection Law.[959] The permit program covers dredging and filling in "coastal wetlands."[960] The Mississippi Marine Resources Council has adopted regulations for the program pursuant to the Coastal Wetlands Protection Law.[961] Violations of permits, the Coastal Wetlands Protection Law, or its regulations may subject a violator to liability for the restoration of the coastal wetlands to their prior condition, any and all damages to

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[953] *Id.* at 1181.

[954] *Id.*

[955] *Id.* at 1184.

[956] *Id.*

[957] *Id.* at 1185.

[958] CWA § 404(g)(1), 33 U.S.C. § 1343(g) (1988).

[959] Coastal Wetlands Protection Law, MISS. CODE ANN. §§ 49-27-1 to -69 (Supp. 1990).

[960] *See id.* § 49-27-5(a) ("coastal wetlands" are defined to mean "all publicly owned lands subject to the ebb and flow of the tide; which are below the watermark of ordinary high tide; all publicly owned accretions above the watermark of ordinary high tide; and all publicly owned submerged water-bottoms below the watermark of ordinary high tide.")

[961] *Id.* § 49-27-59.

wetlands, and fines of up to $500 per day for each day of violation as punitive damages.[962] Furthermore, a violator may be subject to injunctive relief, as well as criminal misdemeanor charges punishable by a fine of not less than $100 or greater than $1,000 per day per violation, by imprisonment of up to thirty days, or both.[963]

VI. Non-Point Source and Storm Water Discharges

In addition to regulation of point source pollutant discharges through the NPDES wastewater permit program, the 1987 amendments to the Clean Water Act added provisions concerning non-point source discharges and storm water discharges. The EPA's regulatory authority in these areas will become increasingly important in the 1990's.

A. Non-Point Source Discharges

The 1987 amendments to the Clean Water Act provided in section 319 a non-point source management program.[964] Section 319 requires each state to prepare and submit to the EPA a state assessment report on non-point sources of pollutant discharges and a state management program for controlling non-point source pollution in navigable waters within the state.[965] The state assessment report should identify the navigable waters within each state which, without additional action to control non-point sources of pollution, cannot attain or maintain the applicable water quality standards. The report must also specify which categories, subcategories, and particular non-point sources add significant pollution to each portion of the previously described waters. To the extent possible, the report should identify the measures to reduce the pollution resulting from each non-point source category, subcategory, and particular non-point. Finally, each state must describe state and local programs for controlling non-point source pollution.[966]

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[962] *Id.* § 49-27-55(a).
[963] *Id.* § 49-27-57(a).
[964] CWA § 319, 33 U.S.C. § 1329 (1988).
[965] CWA § 319(a)-(b), 33 U.S.C. § 1329(a)-(b) (1988).
[966] *Id.* § 319(a)(1), 33 U.S.C. § 1329(a)(1).

The state management program must include, among other provisions, the method to reduce non-point source pollution from each category, subcategory or particular non-point source identified in the state assessment report; the programs necessary to achieve implementation of the method by categories, subcategories and particular non-point source; and a schedule for implementing these programs.[967] Section 319 also provides for a grant program for states to implement non-point source pollution management programs and for carrying out ground water quality protection activities.[968] The Department of Environmental Quality submitted Mississippi's non-point source pollution assessment report and non-point source pollution management report to the EPA Region IV, which approved them as satisfying the statutory requirements.[969]

Furthermore, section 304(1) requires the identification of water bodies within a state that fail to maintain toxic pollutant water quality standards and also requires identification of water bodies that fail to meet toxic pollutant standards as a result of non-point source pollution.[970] Moreover, section 320 of the Clean Water Act establishes a National Estuary Program which requires states to plan and implement controls on both point and non-point sources of pollutants in estuaries.[971]

B. Storm Water Discharges

The general rule set forth in the 1987 amendments to the Clean Water Act is that no permit is required for discharges composed entirely of storm water.[972] There are, however, exceptions to this general rule. Permits are required for storm water discharges which were required to be permitted before February

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[967] *Id.* § 319(b)(2), 33 U.S.C. § 1329(b)(2).

[968] *Id.* § 319(h)-(j), 33 U.S.C. § 1329(h)-(j).

[969] Mississippi Non-Point Source Pollution Assessment Report; Mississippi Non-Point Source Pollution Management Report; Letter from Greer C. Tidwell, Regional Administrator, EPA Region IV, to Governor Ray Mabus (Aug. 22, 1989).

[970] CWA § 304(1)(1)(A), 33 U.S.C. § 1314(1)(1)(A) (1988).

[971] *Id.* § 320, 33 U.S.C. § 1330. "Estuary" means "all of the part of the mouth of a river or stream or other body of water having unimpaired natural connection with open sea and within which the sea water is measurably diluted with fresh water derived from land drainage." *Id.* § 103(n)(4), 33 U.S.C. § 1254(n)(4).

[972] *Id.* § 402¶(1), 33 U.S.C. § 1342¶(1).

1987 and for discharges associated with industrial activity. Similarly, municipalities having storm sewer systems serving greater than 100,000 people and must also obtain permits for storm water discharges. Finally, any discharge which the state or the EPA believes contributes to the violation of a water quality standard or is a significant water polluter must be permitted.[973]

For industrial storm water discharges and storm water discharges from municipal storm sewer systems serving a population of over 250,000, the EPA was required to promulgate regulations setting forth permit application requirements by February 4, 1989.[974] By February 4, 1990, applications for such permits were required to be filed, and by February 4, 1991, the EPA or the state is required to issue or deny each permit.[975] Each permit that is issued must provide for compliance "as expeditiously as practicable," but no later than three years after the permit is issued.[976] The EPA has not yet promulgated the regulations for the permit applications, but neither has it waived the application deadline.[977] Therefore, applications for industrial and large municipality permits must use "current standard NPDES application forms . . . ."[978]

With regard to the municipality system serving between 100,000 and 250,000, the EPA is required to promulgate regulations for permit application requirements by February 4, 1991.[979] Applications for such permits must be filed no later than February 4, 1992, and the EPA or the state must issue or deny such permit by permit applications by February 4, 1993.[980] As with the previous categories, the permit must ensure compliance as quickly as possible but no later than three years after the permit is issued.[981]

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[973] *Id.* § 402¶(2), 33 U.S.C. § 1342¶(2).

[974] *Id.* § 402¶(4)(A), 33 U.S.C. § 1342¶(4)(A).

[975] *Id.*

[976] *Id.*

[977] Memorandum from James R. Elder, Director of Office of Water Enforcement and Permits of U.S. EPA to Water Management Division Directors Regions I-X and State NPDES Directors, dated January 31, 1990.

[978] *Id.*

[979] CWA § 402(a)(4)(B), 33 U.S.C. § 1342(a)(4)(B).

[980] *Id.*

[981] *Id.*

VII. Enforcement

The Clean Water Act contains substantial criminal and civil penalties for violation of effluent limitations and other requirements and for violation of the provisions of NPDES permits and dredged and fill material discharge permits.[982] The level of criminal sanction depends on the degree of scienter possessed by the violator. For criminally negligent acts, the penalties range from $2,500 to $25,000 per day, imprisonment up to one year, or both.[983] For knowing violations, the penalty can vary between $5,000 and $50,000 per day or three years imprisonment or both;[984] and for knowing endangerment, a violation which "places another person in imminent danger of death or serious bodily injury," the violator may be fined up to $250,000, imprisoned up to fifteen years, or he may incur both penalties.[985] Finally, false statements in any document filed under the Act or any type of tampering with any monitoring device, carries a penalty of up to $10,000 per year, up to two years imprisonment, or both.[986] In addition to criminal penalties, civil penalties may be assessed up to $25,000 per day per violation.[987] Furthermore, civil injunctive power for permanent and temporary injunctions is available to the EPA.[988]

In Mississippi, violations of the regulations for the NPDES permit program, as well as any other regulations and any other incidents of "water pollution,"[989] can result in civil penalties of

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[982] *Id.* § 309(c)-(d), 33 U.S.C. § 1319(c)-(d).

[983] *Id.* § 309(c)(1), 33 U.S.C. § 1319(c)(1). Subsequent violations carry penalties up to $50,000 per day, two years imprisonment, or both. *Id.*

[984] CWA § 309(c)(2), 33 U.S.C. § 1319(c)(2) (Supp. V 1989). Subsequent violations carry penalties of up to $100,000 per day, imprisonment of up to six years, or both. *Id.*

[985] CWA § 309(c)(3), 33 U.S.C. § 1319(c)(3) (1988). For an "organization" defendant, potential penalties range up to $1 million, up to 15 years imprisonment, or both, and for subsequent violations, up to $2 million, 30 years, or both. *Id.*

[986] *Id.* § 309(c)(4), 33 U.S.C. § 1319(c)(4). Subsequent convictions carry penalties of up to $20,000 per day, up to four years imprisonment, or both. *Id.*

[987] *Id.* § 309(d), 33 U.S.C. § 1319(d).

[988] *Id.*

[989] Broadly defined as "such contamination, or other alteration of the physical, chemical or biological properties, of any waters of the state, including change in temperature, taste, color, turbidity, or odor of the waters, or such discharge of any liquid, gaseous, solid, radioactive, or other substance or leak into any waters of the state unless in compliance with a valid permit issued therefor by the permit board." Miss. Code Ann. §

up to $25,000 per day.[990] In addition, permanent and temporary injunctive relief is available, as well as any amount reasonably necessary to restock waters with fish or replenish wildlife.[991] Furthermore, criminal penalties of $2,500 to $25,000 per day may be assessed for discharge of pollutants in violation of any permit condition or introduction of pollutants into POTWs in violation of pretreatment standards or in violation of toxic effluent standards.[992]

SAFE DRINKING WATER ACT

The Safe Drinking Water Act (SDWA)[993] has two major divisions: standards for public drinking water systems[994] and standards for underground injection control (UIC) programs.[995] Each of the divisions will be examined in turn.

I. Drinking Water System Standards

A. EPA Primary and Secondary Drinking Water Standards

The Act dictates that the EPA promulgate primary and secondary drinking water standards.[996] Primary drinking water standards, or Maximum Contaminant Levels (MCLs), specify and limit those contaminents which "may have any adverse effect" on human health.[997] The secondary standards, or Secondary Maximum Contaminant Levels (SMCLs), are those which identify the maximum contaminant levels necessary to protect the public welfare.[998] Thirteen SMCLs have been established by the EPA.[999] In addition, MCLs have been established for organic, inorganic, microbiological and radioactive contami-

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49-17-5 (Supp. 1990).

[990] *Id.* § 49-17-43(a).

[991] *Id.* § 49-17-43(b)-(c).

[992] *Id.* § 49-17-43(e).

[993] 42 U.S.C. § 300f-300j-11 (1982 & Supp. V 1987).

[994] SDWA § 1412, 42 U.S.C. § 300g-300g-6 (1982 & Supp. V 1987).

[995] *Id.* § 1412, 42 U.S.C. § 300h-300h-7.

[996] *Id.* § 1412(b), (c), 42 U.S.C. § 300g-1(b), (c).

[997] 42 U.S.C. § 300f(1) (1982).

[998] 42 U.S.C. § 300f(2) (1982).

[999] 40 C.F.R. § 143.3 (1989). These levels restrict contaminants such as chloride, fluoride, iron, manganese, and others. *Id.*

nants.[1000] Both the MCLs and SMCLs represent the maximum levels of contamination permissible from a public water system at the ultimate user's outlet.[1001]

Another category of standards, called Maximum Contaminant Level Goals (MCLGs), have been developed to establish the maximum level for contaminants for which there are "no known or anticipated adverse health effects."[1002] Due to the conservative character of MCLGs, MCLG values for organic contaminants are typically zero or very low.[1003] MCLGs are not directly enforceable, but rather represent health goals.[1004]

The EPA is required by the Safe Drinking Water Act to promulgate MCLs and MCLGs for eighty-three contaminants listed in the Federal Register.[1005] Pursuant to SDWA authority, the EPA has substituted seven of these eighty-three contaminants with seven suspected carcinogens because, in the judgment of the EPA, they are "more likely to be protective of public health."[1006] Also pursuant to requirements of the Act, the EPA promulgated MCLs and MCLGs for fifty-three additional contaminants that may adversely affect human health and which are known or anticipated to occur in public water systems.[1007] By January, 1991, the EPA is required to issue MCLs and MCLGs for at least twenty-five of the contaminants on this "priority"

[1000] *Id.* §§ 141.11-.16.6.

[1001] *Id.* §§ 141.2, 142.2. "Public water system" is defined in the SDWA as "a system for the provision to the public of piped water for human consumption, if such system has at least fifteen service connections or regularly serves at least twenty-five individuals." 42 U.S.C. § 300(f)(4) (1982). The regulations add to the end of this definition, "[A]t least sixty days out of the year." 40 C.F.R. §§ 141.2, 142.2 (1989). Excepted from the coverage of the primary drinking water regulations is any public water system that consists only of distribution and storage facilities, obtains all of its water from, but is not owned or operated by, a public water system, does not sell water to any person, and is not a carrier which conveys passengers in interstate commerce. *Id.* § 141.3.

[1002] *Id.* § 141.2.

[1003] *Id.* §§ 141.50-.52.

[1004] *Id.* § 141.2. MCLGs, however, are enforceable and must be attained when undertaking CERCLA remedial actions where drinking water sources have been affected. 55 Fed. Reg. 8848 (1990) (to be codified at 40 C.F.R. § 300.430(e)(2)(i)).

[1005] SDWA § 1412(b)(1), 42 U.S.C. § 300g-1(b)(1) (Supp. V 1987). These contaminants may be found at 47 Fed. Reg. 9350 (1982) and 48 Fed. Reg. 45,502 (1983).

[1006] 53 Fed. Reg. 1892 (1988); *see* SDWA § 1412(b)(2), 42 U.S.C. § 300g-1(b)(2) (Supp. V 1987) (only seven substitutions from the original list are allowed).

[1007] 53 Fed. Reg. 1892 (1988).

list.[1008] At that time and every three years thereafter, the EPA must issue MCLs and MCLGs for twenty-five more contaminants.[1009]

B. State Programs

States are expected to take the lead role in enforcing SDWA requirements.[1010] SDWA provides for delegation of the safe drinking water program to a state that (1) has promulgated drinking water regulations at least as strict as their federal counterparts, (2) has put in place adequate enforcement procedures for those regulations, (3) maintains EPA mandated records, (4) allows permit variances or exemptions only under circumstances that are equivalent to those that the SDWA deems appropriate and (5) has created and is capable of implementing a plan to guarantee safe drinking water in case of emergency.[1011]

Mississippi has received delegation of the safe drinking water program under the SDWA. Pursuant to authority of the Mississippi Safe Drinking Water Law,[1012] the Mississippi State Department of Health has promulgated its Regulation Governing Public Water Systems (Mississippi Primary Drinking Water Regulation).[1013] It has also adopted the national primary drinking regulation as part of the state regulatory scheme.[1014]

C. Enforcement

When a state has been delegated the SDWA drinking water system program, it has primary enforcement responsibility.[1015] Under the Mississippi Safe Drinking Water Law, willful viola-

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[1008] SDWA § 1412(b)(3)(C)-(D), 42 U.S.C. § 300g-1(b)(3)(C)-(D) (Supp. V 1987).

[1009] *Id.* § 1412(b)(3)(C), 42 U.S.C. § 200g-1(b)(3)(C).

[1010] SDWA § 1413, 42 U.S.C. § 300g-2 (1982 & Supp. V 1987).

[1011] *Id.* § 1413(a), 42 U.S.C. § 300g-2(a).

[1012] Mississippi Safe Drinking Water Law, MISS. CODE ANN. §§ 41-26-1 to -21 (Supp. 1990).

[1013] MISSISSIPPI STATE DEPARTMENT OF HEALTH, DIVISION OF WATER SUPPLY, REGULATION GOVERNING PUBLIC WATER SYSTEMS (January 3, 1989).

[1014] 40 C.F.R. §§ 141-142 (1989). Part 141 contains the actual drinking water standards, while part 142 outlines the procedures for state implementation. *Id.* It should be noted that these regulations have been amended effective December 31, 1990. 54 Fed. Reg. 25,544 (1989); 54 Fed. Reg. 27,466 (1989).

[1015] SDWA § 1413(a), 42 U.S.C. § 300g-2(a) (1982 & Supp. V 1987).

tors of the Mississippi Primary Drinking Water Regulation may be subject to civil penalties of up to $5,000 per day per violation.[1016] In addition, the Director of the Department of Health may institute a civil action to obtain injunctive relief to prevent violation of any order or regulation issued under the Act.[1017]

If the EPA determines that a public water system in any delegated state has not complied with national drinking water regulations or with any variances from or exemptions to those regulations, then the EPA will notify the state and the public water system of such violations.[1018] If, within thirty days of the EPA notification, the state has not commenced appropriate enforcement action, the EPA must either issue a compliance order to the public water system or commence a civil enforcement action.[1019] The EPA is not required to give notice to the state if that state has not been delegated the SDWA drinking management program.[1020] The EPA must, however, either issue an order to the noncomplying public water system or bring a civil enforcement suit.[1021] The EPA may also bring a civil enforcement action if requested by the governor or by the state agency having jurisdiction over the program.[1022]

If a civil action is brought, a court may enter such judgment "as protection of public health may require."[1023] In fashioning the relief, the court should consider both the time required for compliance and the presence or absence of other water supplies.[1024] Should the court find that there has been a willful violation, the violator may be subjected to penalties of up to $25,000 per day per violation.[1025] The seriousness of the violation, the population at risk, and other factors must be consid-

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[1016] MISS. CODE ANN. § 41-26-17(1)-(2) (Supp. 1990).

[1017] *Id.* § 41-26-17(3).

[1018] SDWA § 1414(a)(1)(A), 42 U.S.C. 300g-3(a)(1)(A) (1982 & Supp. V 1987). The EPA may conduct a public hearing if it makes a finding of noncompliance. 40 C.F.R. §§ 142.32-.33 (1989).

[1019] SDWA § 1414(a)(1)(B), 42 U.S.C. § 300g-3(a)(1)(B) (Supp. V 1987).

[1020] SDWA § 1414(a)(2), 42 U.S.C. § 300g-3(a)(2) (Supp. V 1987).

[1021] *Id.*

[1022] SDWA § 1414(b)(2), 42 U.S.C. 300g-3(b)(2) (1982).

[1023] SDWA § 1414(b), 42 U.S.C. 300g-3(b) (Supp. V 1987).

[1024] *Id.*

[1025] *Id.*

ered in levying the civil penalty.[1026] Additionally, an owner or operator of a public water system must provide notice of its noncompliance to its customers or users, and failure to provide this notice may subject the violator to a penalty of up to $25,000.[1027]

The EPA is authorized to issue a compliance order, but such an order will not take effect until after notice and an opportunity for public hearing has occurred and the delegated state has had an opportunity to confer with the EPA.[1028] Any person who violates or fails or refuses to comply with an order after it has been issued may be liable for a civil penalty of up to $25,000 per day per violation.[1029] Furthermore, any person who fails or refuses to allow the EPA or the Comptroller General to review records or conduct inspections may be subject to a civil penalty of up to $25,000.[1030]

Citizen suits may be brought against any person or government entity, to the degree allowed by state sovereign immunity, that is allegedly in violation of any requirement under the SDWA.[1031] Additionally, citizen suits may be maintained against the EPA "where there is alleged a failure of the EPA to perform any act or duty" under the SDWA that is not discretionary.[1032] A citizen suit is not proper, however, if the plaintiff has not provided sixty days notice to the EPA, the state, and the violator, or if the EPA has already initiated a court action for the violation.[1033]

II. Underground Injection Control

A. UIC Requirements

The EPA has identified every state as having a need for a program to protect drinking water sources by the regulation of underground injection of fluids.[1034] Underground injection, or

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[1026] *Id.*
[1027] SDWA § 1414(g)-3(c), 42 U.S.C. § 300g-3(c) (1982 & Supp. V 1987).
[1028] SDWA § 1414(g)(2), 42 U.S.C. § 300g-3(g)(2) (Supp. V 1987).
[1029] *Id.*
[1030] *Id.* § 1445(c), 42 U.S.C. § 300j-4(c).
[1031] SDWA § 1449(a), 42 U.S.C. § 300j-8(a) (1982).
[1032] *Id.*
[1033] *Id.* § 1449(b), 42 U.S.C. § 300j-8(1).
[1034] 40 C.F.R. § 144.1 (1989).

well injection, has been defined as the "subsurface emplacement of 'fluids' through a bored, drilled or driven 'well.' "[1035] The SDWA provides that underground injections endanger the drinking water source if the injection reaches or can be expected to reach the drinking water source and if the presence of the injection in the source results in noncompliance with the primary drinking water regulation.[1036] A drinking water source is also in danger if the injection adversely affects human health in any other way.[1037]

Underground injection wells are regulated as belonging to one of the five following classes:

> (1) *Class I*: Industrial and municipal disposal wells for hazardous and nonhazardous wastes that inject below the underground source of drinking water in the area, other than Class IV wells;
> (2) *Class II*: Wells that inject fluid for oil and gas recovery and for storage of hydrocarbons that are liquid at standard temperature and pressure;
> (3) *Class III*: Wells that inject for extraction of minerals;
> (4) *Class IV*: Wells which inject hazardous waste or radioactive waste into or above underground sources of drinking water; and
> (5) *Class V*: Injection of wells not included in Classes I, II, III or IV.[1038]

Specific regulations have been established by the EPA, which set forth general program requirements, authorize underground injection by rule, establish a permit program and permit conditions, and ensure financial responsibility of injectors.[1039] Significant restrictions are also placed on Class I, wells because of the inherent danger involved in hazardous waste injection.[1040] Additional minimal technical requirements and siting criteria have been developed for new Class I as well as other classes of

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[1035] *Id.* § 144.3.
[1036] SDWA § 1422(d)(2), 42 U.S.C. § 300h(d)(2) (1982).
[1037] *Id.*
[1038] 40 C.F.R. § 144.6 (1989).
[1039] *Id.* §§ 144.1-.70.
[1040] *Id.* § 148.

wells.[1041] Class IV wells have now been banned by RCRA.[1042]

B. State Programs

States are expected to establish UIC programs in accordance with federal criteria.[1043] These minimum requirements require the state to prohibit underground injection unless authorized by a permit or rule, issue a permit or effect a rule for underground injection only after the state has guaranteed that the underground injection will not endanger drinking water sources, and assure that inspection, monitoring, record-keeping and reporting requirements will meet according to federal standards.[1044]

The Mississippi Department of Environmental Quality has received UIC program delegation for Classes I, III, IV and V wells in the state while the Mississippi Oil and Gas Board has UIC authority for Class II wells in the state.[1045] The UIC program for all classes of wells on Indian lands in Mississippi is administered by the EPA.[1046]

Pursuant to the authority of the Mississippi Air and Water Pollution Control Law,[1047] the Department of Environmental Quality promulgated its Underground Injection Control Program Regulations, which establishes a permit program in compliance with all federal requirements.[1048] The regulations expressly require compliance with EPA regulations codified at 40 C.F.R. §§ 144, 146 and 148, except those applicable to EPA-administered programs only.[1049] As required by the EPA regulations,[1050] the Bureau of Pollution Control and EPA Region IV

[1041] *Id.* §§ 146.1-.73.

[1042] *Id.* § 144.13; *see* RCRA § 3004(f), 42 U.S.C. § 6924(f) (Supp. V 1987) (authorizing EPA to ban disposal of certain hazardous wastes in deep injection wells).

[1043] SDWA § 1421(b), 42 U.S.C. § 300h(b) (1982 & Supp. V 1987).

[1044] *Id.* For more detailed state program requirements, see 40 C.F.R. § 145 (1989).

[1045] 40 C.F.R. § 147.1250 (1989).

[1046] *Id.* § 147.1251.

[1047] Mississippi Air and Water Pollution Control Law, MISS. CODE ANN. §§ 49-17-1 to -433 (1972 & Supp. 1989).

[1048] UNDERGROUND INJECTION CONTROL PROGRAM REGULATIONS, MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES, BUREAU OF POLLUTION CONTROL (July 26, 1989).

[1049] *Id.*

[1050] 40 C.F.R. § 145.22(a)(4) (1989).

have entered into a Memorandum of Agreement for the underground injection control program.[1051] With regard to Class II wells, the State Oil and Gas Board revised its statewide Rule 63 to expressly provide the requirements for a Class II injection well permit.[1052] The Oil and Gas Board and EPA Region IV have also entered into a Memorandum of Agreement with respect to the Class II program.[1053]

C. Enforcement

As with the drinking water program as a whole, the states have primary enforcement responsibility for the UIC program if they have received delegation of the program.[1054] Pursuant to the Mississippi Air and Water Pollution Control Law, civil penalties of up to $25,000 per day per violation may be assessed.[1055] In addition, a violator may be required to pay the amount necessary to restock waters or replenish wildlife, if necessary.[1056] Furthermore, any person who causes pollution which requires immediate remedial action will be liable for all costs incurred in the action which may be recovered through a civil action in the circuit court of the county in which the pollution occurred.[1057]

If the EPA determines that any person who is subject to the underground injection control program in a delegated state is violating program requirements, it will notify the state and the person violating the requirement.[1058] If the state has not commenced appropriate enforcement action within thirty days after the EPA's notification, the EPA must either issue an order requiring the person to comply with the requirements or com-

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[1051] UNDERGROUND INJECTION CONTROL PROGRAM MEMORANDUM OF AGREEMENT BETWEEN THE MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES, BUREAU OF POLLUTION CONTROL, AND THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, REGION IV (March 8, 1982).

[1052] OIL AND GAS BOARD STATEWIDE RULE 63 (revised March 2, 1989); *see* MISS. CODE ANN. § 53-1-17 (Supp. 1990) (regulatory powers of Oil and Gas Board).

[1053] UNDERGROUND INJECTION CONTROL PROGRAM MEMORANDUM OF AGREEMENT BETWEEN THE STATE OF MISSISSIPPI AND EPA REGION IV (October 21, 1988).

[1054] SDWA § 1423(a), 42 U.S.C. § 300h-2 (1982 & Supp. V 1987).

[1055] MISS. CODE ANN. § 49-17-43(a) (Supp. 1990).

[1056] *Id.* § 49-17-43(c).

[1057] *Id.* § 49-17-43(d).

[1058] SDWA § 1423(a)(1), 42 U.S.C. § 300h-2(a)(1) (Supp. V 1987).

mence a civil enforcement action.[1059] Any person who violates any requirement of an underground injection control program or any order requiring compliance will be subject to a civil penalty of up to $25,000 for each day of the violation.[1060] For a willful violation, the penalty may be imprisonment for up to three years, a fine in accordance with Title 18 of the United States Code, or both.[1061]

For violations of regulations for which the EPA is authorized to bring a civil action, except certain regulations relating to injection for oil and gas production, the EPA may also issue an order requiring compliance and/or assessing a civil penalty of up to $10,000 for each day of violation to a maximum penalty of $125,000.[1062] With regard to violations of regulations relating to certain underground injection relating to oil and gas production, the EPA may issue an order assessing a civil penalty of up to $5,000 for each day of violation up to a maximum penalty of $125,000, require compliance with the regulation, or take both measures.[1063] Neither of these administrative orders may be issued without the opportunity for a hearing.[1064]

CLEAN AIR ACT

By the time the Clean Air Act[1065] was established in 1970, major metropolitan and industrialized areas in the United States had become significantly exposed to photochemical[1066] and sulfurous smog,[1067] acid rain[1068] and airborne particulate matter.

[1059] *Id.*

[1060] SDWA § 1423(b), 42 U.S.C. § 300h-2(b) (1982).

[1061] *Id.*

[1062] SDWA § 1423(c)(1), 42 U.S.C. § 300h-2(c)(1) (Supp. V 1987).

[1063] *Id.* § 1423(c)(2), 42 U.S.C. § 300h-2(c)(2).

[1064] *Id.* § 1423(c)(3), 42 U.S.C. § 300h-2(c)(3).

[1065] 42 U.S.C. §§ 7401-7642, 84 Stat. 1676 (December 31, 1970).

[1066] Photochemical or oxidizing smog is the result of chemical reaction between hydrocarbons and nitrogen oxides in the presence of light. The products of such reactions include both the brown haze associated with photochemical smog and the chemical ozone. S. MANAHAN, ENVIRONMENTAL CHEMISTRY 379-402 (4th ed. 1984).

[1067] Sulfurous or reducing smog is produced when sulfur oxides which may be produced by the burning of fuels with a high sulfur content are mixed with fog. The resulting mixture is chemically active and acidic. S. MANAHAN, *supra* note 1064, at 327-33, 379.

[1068] Acid rain is generated from the combination of acidic gases such as sulfur oxides, nitrogen oxides and halides which may be produced from combustion processes or

Citing growth in the amount and complexity of air pollutants brought about by urbanization, industrialization, and increased use of motor vehicles,[1069] Congress recognized the necessity for increased regulatory activity by federal, state and local governments.[1070] The fact that the CAA was the first major environmental act passed by Congress for administration and enforcement by the newly formed Environmental Protection Agency reflects the level of concern air quality received at that time.

The CAA has been revised only once since initial passage, that being in 1977.[1071] The fact that the federal air program has not been revised since 1977 reflects the economic and political problems associated with measures required to enhance ambient air quality in the United States. The Bush Administration has identified revision of the Clean Air Act as a major priority and passage of major revisions in the CAA during the 1990 session of Congress is likely.

I. Air Quality Control Regions

States are given primary responsibility for controlling ambient air quality and this control begins with the establishment of "air quality control regions".[1072] States are to establish AQCRs within their boundaries as necessary to control emissions to the atmosphere and comply with national ambient air quality standards.[1073] The CAA also allows establishment of interstate AQCRs in areas deemed necessary or appropriate for the attainment and maintenance of ambient air quality standards.[1074]

II. National Ambient Air Quality Standards (NAAQS)

The CAA calls for EPA to establish and maintain a listing of pollutants which are anticipated to endanger public health or

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by the combination of hydrogen sulfide gas occurring from natural sources with moisture and clouds. S. Manahan, *supra* note 1064, at 327-52.

[1069] CAA § 101(a)(1)-(2), 42 U.S.C. § 7401(a)(1)-(2) (1982).

[1070] *Id.* § 101(a)(3)-(4), 42 U.S.C. § 7401(a)(3)-(4).

[1071] Pub. L. 95-95, 91 Stat. 686 (August 7, 1977).

[1072] CAA § 107(a), 42 U.S.C. § 7407(a) (1982).

[1073] *Id.* § 109, 42 U.S.C. § 7409; 40 C.F.R. § 50 (1989).

[1074] CAA §§ 106, 107(c), 42 U.S.C. § 7407(b) (1982).

welfare.[1075] The listed entities are commonly referred to as "criteria pollutants" and EPA is required to issue an air quality criteria for each.[1076] The criteria is to be based on the latest scientific information indicating the kind and extent of all identifiable effects on public health or welfare which may be expected from the presence of the pollutant in ambient air.[1077] The criteria pollutants are sulfur dioxide, particulates, carbon monoxide, photochemical oxidants (ozone), hydrocarbons, nitrogen dioxide and lead.[1078]

EPA must publish NAAQs for each criteria pollutant.[1079] Primary NAAQs are developed as levels, allowing for an adequate margin of safety, which are necessary to protect the human health.[1080] Such standards are intended to protect the most sensitive subpopulation. Secondary NAAQs are set so as to protect public welfare from any known or anticipated adverse effect which may result from presence of such air pollutants.[1081] Typically, primary and secondary NAAQS values are not equivalent.[1082] NAAQS values are past directly enforceable standards but rather are intended to establish ceiling concentrations of criteria pollutants in AQCRs. States are to limit the emission of criteria pollutants in order to maintain ambient air quality in AQCRs which are consistent with published NAAQS values.[1083] Primary and secondary NAAQS values have been established for sulfur dioxide, particulate matter smaller than ten microns in size (PM10), carbon monoxide, ozone, nitrogen oxides, and lead.[1084] Air quality criteria and NAAQS values are to be revised by an independent scientific committee[1085] every five years.[1086] Mississippi has adopted ambient air quality standards

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[1075] *Id.* § 108(a)(1), 42 U.S.C. § 7408(a)(1).
[1076] *Id.* § 108(a)(2), 42 U.S.C. § 7408(a)(2).
[1077] *Id.*
[1078] 40 C.F.R. § 50 (1989).
[1079] CAA § 109(a)(1)-(2), 42 U.S.C. § 7409(a)(1)-(2) (1982).
[1080] *Id.* § 109(b)(1), 42 U.S.C. § 7409(b)(1).
[1081] *Id.* § 109(b)(2), 42 U.S.C. § 7409(b)(2).
[1082] 40 C.F.R. § 50.4-.5 (1989).
[1083] CAA § 107(a), 42 U.S.C. § 7407(a) (1982).
[1084] 40 C.F.R. § 50.4-.12 (1989).
[1085] CAA § 117, 42 U.S.C. § 7417 (1982).
[1086] *Id.* § 109(d)(1)-(2), 42 U.S.C. § 7409(d)(1)-(2).

equivalent to federal NAAQS values except for odor and total suspended particulates.[1087]

III. Sources of Pollutants

The CAA acknowledges two types of pollutant sources, those that are mobile and those which are stationary.[1088] Stationary sources are further classified as "existing sources,"[1089] those brought into existence prior to passage of the CAA in 1970, or as "new sources"[1090] established after passage of the CAA. Performance standards that are directly enforceable on new sources are called for (1) in order to establish a nationally uniform program for regulating new sources and (2) reflect Congress' intent to subject new sources to more stringent restrictions for pollutant emissions.[1091]

IV. Standards Which Are Directly Enforceable

The principal mechanism for control of air quality under the CAA given to a state is the authority[1092] to require all sources within an AQCR to limit emissions in order to comply with NAAQS values. In an effort to introduce national uniformity into the air program, two sets of standards have been established which are directly enforceable upon sources: (1) New Source Performance Standards[1093] and (2) National Emissions Standards for Hazardous Air Pollutants.[1094]

A. New Source Performance Standards (NSPS)

EPA is required to generate a list of categories of sources which may reasonably be anticipated to endanger public health

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[1087] Mississippi Department of Environment Quality, Bureau of Pollution Control, Ambient Air Quality Standards, Regulation No. APC-S-4 (June 22, 1988).

[1088] The CAA is organized in three titles. Title I deals primarily with stationary sources, title II deals exclusively with mobile sources, and title III has general applicability. CAA § 111.

[1089] CAA § 111(a)(6), 42 U.S.C. § 7411(a)(6) (1982).

[1090] *Id.* § 111(a)(2), 42 U.S.C. § 7411(a)(2).

[1091] *Id.* § 111, 42 U.S.C. § 7411; 40 C.F.R. § 60.30-.34 (1989).

[1092] CAA §§ 107(a) - 111(c)(1), 42 U.S.C. §§ 7407(a), 7411(c)(1).

[1093] CAA § 111, 42 U.S.C. § 7411 (1982).

[1094] *Id.* § 112, 42 U.S.C. § 7412.

or welfare.[1095] Regulations are to be promulgated establishing NSPSs for each category.[1096] EPA may distinguish among classes, types, and sizes within each category for the purpose of establishing NSPS for that category.[1097] It should be noted that emission limitations specified under NSPS are not restricted to being criteria pollutants.[1098]

In determining priorities for promulgation of NSPS for categories of "major sources,"[1099] EPA must consider: (1) the quantity of air pollutants each category will emit, (2) the extent to which each such pollutant may reasonably be expected to endanger public health or welfare, and (3) the mobility and competitive nature of each category of sources.[1100] NSPS have been established for some fifty categories of industries.[1101]

Each state may develop a plan for implementing and enforcing NSPS.[1102] Upon approval by EPA, the state will be delegated authority for the NSPS program.[1103] Mississippi has been delegated the NSPS program by Region IV of EPA.[1104]

B. National Emissions Standards for Hazardous Air Pollutants (NESHAPs)

1. Scope of NESHAPs Program

Hazardous air pollutants (HAP) are defined as air pollutants for which no national ambient air quality standard is applicable and which may reasonably be anticipated to result in an increase in mortality or serious incapacitating or irreversible ill-

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[1095] *Id.* § 111(b)(1)(A), 42 U.S.C. § 7411(b)(1)(A).

[1096] *Id.* § 111 (b)(1)(B), 42 U.S.C. § 7411(b)(1)(B); *see, e.g.*, 40 C.F.R. § 60 (1989) (regulations establishing NSPs, for each category of pollutants).

[1097] CAA § 111(b)(2), 42 U.S.C. § 7411(b)(2) (1982).

[1098] Requirements stipulated under current NSPS standards address both criteria and noncriteria pollutants. 40 C.F.R. § 60 (1989).

[1099] CAA § 111(f)(1), 42 U.S.C. § 7411(f)(1) (1982); 40 C.F.R. § 60 (1989).

[1100] CAA § 111(f)(2), 42 U.S.C. § 7411(f)(2) (1982).

[1101] 40 C.F.R. § 60 (1989).

[1102] CAA § 111(c)(1), 42 U.S.C. § 7411(c)(1) (1982).

[1103] *Id.*

[1104] Letter from Charles R. Jetter, Regional Administrator of EPA Region IV, to Col. Charles L. Blalock, Executive Director, Mississippi Department of Natural Resources, Bureau of Pollution Control (November 30, 1981).

ness.[1105] EPA is required to publish a list of HAPs for which it intends to establish an emissions standard.[1106] Emission standards must be established for a HAP within 180 days after listing unless evidence collected indicates the pollutant is clearly not a HAP.[1107] This NESHAP is to include an adequate margin of safety to protect human health from the dangers of the HAP.[1108]

EPA has established NESHAP standards pursuant to section 112 of the CAA for arsenic, asbestos, beryllium, mercury, radionuclides and vinyl chloride.[1109] The NESHAP for radionuclides is presently under a state of suspension.[1110] States may develop and submit to the EPA a procedure for implementing and enforcing NESHAP standards for stationary sources located within the boundaries of the state. Upon approval by the EPA administrator, the state will be delegated authority to enforce the NESHAP program.[1111] Mississippi has been delegated the NESHAP program by Region IV of EPA for all pollutants except radionuclides.[1112]

2. Asbestos NESHAP

The asbestos NESHAP[1113] is frequently encountered and deserves specific discussion. Four general sets of requirements are established under the asbestos NESHAP. First, there can be no visible emissions of airborne asbestos particles from the work place into the environment.[1114] Second, all friable asbestos containing materials or ACM which may become friable[1115] must be

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[1105] CAA § 112(a)(1), 42 U.S.C. § 7412(a)(1) (1982); 40 C.F.R. § 61 (1989).

[1106] CAA § 112(b)(1)(A), 42 U.S.C. § 7412(b)(1)(A) (1982).

[1107] *Id.* § 112(b)(1)(B), 42 U.S.C. § 7412(b)(1)(B).

[1108] *Id.*

[1109] 40 C.F.R. § 61 (1989).

[1110] 55 *Fed. Reg.* 10,455 (March 21, 1990).

[1111] CAA § 112(d)(1), 42 U.S.C. § 7412(d)(1) (1982).

[1112] Letter from Charles R. Jetter, Regional Administrator of EPA Region IV, to Col. Charles L. Blalock, Executive Director, Mississippi Department of Natural Resources, Bureau of Pollution Control (November 30, 1981).

[1113] 40 C.F.R. §§ 61,140-.156 M (1989).

[1114] *Id.* §§ 61,148(b)(2), -.149(b)(1) -.151(b), -.152(b), -.153(a)(1).

[1115] Asbestos containing material is defined as any material which contains greater than 1% asbestos on a dry weight basis. ACM is considered to be friable if it can be

removed from a building prior to its demolition.[1116] Third, notification of the state agency authorized to implement the CAA must be made ten days prior to the start of activity which will result in the disturbance of more than 160 square or 260 linear feet of ACM.[1117] Twenty days prior notice is required before statement of activity involving less than 160 square or 260 linear feet of ACM.[1118] Finally, waste disposal sites receiving asbestos must satisfy certain safety and warning requirements.[1119] The reader should note that a revised asbestos NESHAP has been published in proposed form.[1120]

V. State Implementation Plans (SIP)

The Clean Air Act charges each state with the primary responsibility for protecting ambient air quality within its entire geographic area.[1121] This is done through establishment of a state implementation plan[1122] which specifies the manner in which NAAQSs will be achieved and maintained in each of the state's ACCRs.[1123] Each state must develop a SIP, provide for public notice and allow reasonable time for public comment, and submit the SIP to the ERA within nine months from the date a NAAQSs is established.[1124] The SIP must provide for implementation, maintenance, and enforcement of both primary and secondary NAAQSs within each AQCR of the state.[1125] The SIP must provide a mechanism for attainment of primary NAAQSs as expeditiously as possible, but in no case longer than three years from the date of the plan's approval.[1126] Upon approval by EPA, a SIP is promulgated by EPA as federal regulations and is

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crumbled, pulverized or reduced to powder by hand pressure. *Id.* § 763.80.

[1116] *Id.* § 61.147(a).

[1117] *Id.* § 61,146(a) (1989).

[1118] *Id.*

[1119] 40 C.F.R. § 61.156 (1989).

[1120] 54 *Fed. Reg.* 912 (1989). The new rule is expected to be published in final form in the second half of 1990 and will likely contain significant changes. *Id.*

[1121] CAA § 107(a), 42 U.S.C. § 7407(a) (1982).

[1122] *Id.* § 110, 42 U.S.C. § 7410(a).

[1123] *Id.* § 107(a), 42 U.S.C. § 7407(d).

[1124] *Id.* § 110(a)(1), 42 U.S.C. § 7410(a)(1).

[1125] *Id.*

[1126] *Id.* § 110(a)(2)(A), 42 U.S.C. § 7410(a)(2)(A).

enforceable as federal and state law. The Mississippi SIP has been approved by EPA and can be found at 40 C.F.R. Part 52, Subpart (Z).

A. SIP Provisions

The SIP must set emissions limitations, schedules and time tables as necessary to assure attainment and maintenance of primary and secondary NAAQS.[1127] Such measures may include transportation controls, air quality maintenance plans, and preconstruction review of direct sources of air pollution.[1128] The state must also establish and operate a system for monitoring and evaluating ambient air quality, must compile this date, and upon request, must submit such information to EPA.[1129]

The SIP must require enforcement of emissions limitations and regulate construction, modification and operation of stationary sources.[1130] Such regulation will include a permit program to assure that NAAQSs are achieved and maintained. The permit program will exert control over any major stationary source[1131] or the construction or modification of a new source subject to a NSPS in any area which will prevent the attainment or maintenance of the AQCRs meeting primary or secondary NAAQSs.[1132]

No major stationary source shall be constructed or modified in any "nonattainment area"[1133] to which such plan applies if emissions from that facility will cause or contribute to the concentration of any pollutant for which an NAAQS exists unless the SIP has permitting requirements relating to nonattainment areas.[1134] The SIP must call for prevention of significant deterioration of air quality and visibility[1135] as well as require owners or operators of major stationary sources to pay a fee sufficient to

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[1127] *Id.* § 110(a)(2)(B), 42 U.S.C. § 7410(a)(2)(B); *see* 40 C.F.R. § 52.1273 (1989) (Mississippi attainment dates for compliance with national standards).

[1128] CAA § 110(a)(2)(B), 42 U.S.C. § 7410(a)(2)(B) (1982).

[1129] *Id.* § 110(a)(2)(C), 42 U.S.C. § 7410(a)(2)(C).

[1130] *Id.* § 110(a)(2)(D), 42 U.S.C. § 7410(a)(2)(D).

[1131] *Id.* § 110(a)(2)(D), 42 U.S.C. § 7410(a)(2)(D).

[1132] *Id.* § 110(a)(4), 42 U.S.C. § 7410(a)(4).

[1133] *Id.* § 171(a)(2), 42 U.S.C. § 7501(a)(2).

[1134] *Id.* § 110(a)(2)(I), 42 U.S.C. § 7410(a)(2)(I); *see* CAA § 172, 42 U.S.C. § 7502 (1982) (attainment of NAAQS must be expedient).

[1135] *Id.* § 110(a)(2)(J), 42 U.S.C. § 7410(a)(2)(J).

cover reasonable costs for reviewing and acting upon the application for permits.[1136] Adequate provisions must be included in the SIP to prohibit any stationary source within the state from emitting an air pollutant in amounts which will prevent compliance with NAAQSs in any other state.[1137]

States are required to provide funding along with adequate personnel and authority to implement the SIP.[1138] Such implementation shall include requirements for installation of air pollution control devices by owners or operators of stationary sources within the state, along with monitoring of emissions from such sources and periodic reports of monitoring activity to the designated state agency.[1139] Such reports will be correlated by the state agency with any limitations or standards established pursuant to the Clean Air Act.[1140] SIPs are also to provide for periodic inspection and testing of motor vehicles to enforce compliance with applicable emissions standards to the extent necessary and practicable.[1141] Provisions are also to be included to allow for revision of the SIP in the event of changes in primary or secondary NAAQSs or the availability of improved or more expeditious methods for achieving such NAAQS values.[1142]

B. SIP Revisions

Revision of a state's SIP may be required for one of two reasons. In the event EPA revises or publishes a new primary or secondary NAAQS, the SIPs for all states must be revised within nine months to reflect this change.[1143] As an example, EPA changed the NAAQS for particulates in order to monitor the more dangerous very small atmospheric particles (PM10). This is in contrast to total suspended particles (TSP) which

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[1136] *Id.* § 110(a)(2)(K), 42 U.S.C. § 7410(a)(2)(K).

[1137] *Id.* § 110(a)(2)(E), 42 U.S.C. § 7410(a)(2)(E); *see id.* § 126, 42 U.S.C. § 7426 (written notice must be provided to all nearby states).

[1138] *Id.* § 110(a)(2)(F), 42 U.S.C. § 7410(a)(2)(F).

[1139] *Id.*

[1140] *Id.*

[1141] *Id.* § 110(a)(2)(G), 42 U.S.C. § 7410(a)(2)(G).

[1142] *Id.* § 110(a)(2)(H), 42 U.S.C. § 7410(a)(2)(H).

[1143] *Id.* § 110(a)(2)(H)(i), 42 U.S.C. § 7410(a)(2)(H)(i).

were monitored under the original NAAQS.[1144] The second reason to revise a SIP can be if EPA deems that the plan is substantially inadequate to achieve compliance with primary to secondary NAAQS values or any additional requirements called for under the Clean Air Act.[1145] State variances are also treated as SIP revisions[1146] requiring EPA to follow the promulgation process with publication in the *Federal Register*.

C. Nonattainment Areas

The 1977 amendments to the CAA called for states to inventory AQCRs and to designate those AQCRs proportions thereof which do not comply with primary or secondary NAAQSs or those which cannot be classified using current information.[1147] Since NAAQSs are somewhat chemically specific, it is possible for an AQCR to be classified as a nonattainment area with respect to only one of the many criteria pollutants. AQCRs with air quality levels better than published NAAQSs must also be indicated in this inventory.[1148]

D. Permitting Program for Nonattainment Areas

As a precondition for the construction or modification of any major stationary source in a nonattainment area on or after July 1, 1979, the SIP must provide for attainment of NAAQS values as expeditiously as possible but in no case later than December 31, 1985,[1149] except in the cases of ozone or carbon monoxide nonattainment. AQCRs designated as nonattainment areas with respect to ozone or carbon monoxide must attain NAAQS

[1144] 40 C.F.R. § 50 (1989). For a number of years, there has been intense debate concerning the relative risk to human health posed by particulates of different physical sizes. The present method used to monitor atmospheric particulate takes into account the more injurious nature of very fine particulate and measures the concentration of only those airborne particles which are less than 10 microns in diameter. This is referred to as the PM10 method. *Id.*

[1145] CAA § 110(a)(2)(H)(ii), 42 U.S.C. § 7410(a)(2)(H)(ii) (1982).

[1146] 40 C.F.R. § 51.104(g) (1989).

[1147] CAA § 107(d)(1), 42 U.S.C. § 7407(d)(1) (1982).

[1148] *Id.* § 107(d)(2)(E), 42 U.S.C. § 7407(d)(1)(E).

[1149] *Id.* § 172(a)(1), 42 U.S.C. § 7502(a)(1).

levels on or before December 31, 1987.[1150]

The SIP must comply with a variety of additional requirements if permits are to be issued to major new or modified stationary sources. The plan must provide for implementation of all reasonably available control measures as expeditiously as possible and require "reasonable further progress."[1151] This is to include reduction in emissions from existing sources through the addition of reasonably available control measures.[1152] A comprehensive accurate inventory of actual emissions of each nonattainment pollutant for all sources is to be maintained and updated as needed to provide that the above reduction requirements are met.[1153] The SIP must also require permits for construction and operation of new or modified major sources.[1154]

Permitting for new or modified major sources in nonattainment areas are subject to four major requirements. First, total allowable emissions from existing sources in the AQCR must be sufficiently reduced to the extent that additional emissions from the source requesting a permit will not impede progress toward attainment.[1155] From a practical perspective, this means the resulting total emissions for the AQCR must be *less* after the permit is granted than before. Second, the source must comply with the "lowest achievable emission rate" (LAER).[1156] Third, the owner or operator of the source must demonstrate that all major stationary sources it owns or operates are subject to emission limitations and are in compliance or are on schedules of compliance with all applicable emission limitations.[1157] Finally, the SIP must be in compliance with all other statutory requirements for nonattainment areas.[1158]

[1150] *Id.* § 110(a)(2), 42 U.S.C. § 7410(a)(2).

[1151] *Id.* § 171(1), 42 U.S.C. § 7501(1).

[1152] *Id.* § 172(b)(2)-(3), 42 U.S.C. § 7502(b)(2)-(3).

[1153] *Id.* § 172(b)(5), 42 U.S.C. § 7502(b)(5).

[1154] *Id.* § 172(b)(6), 42 U.S.C. § 7502(b)(6).

[1155] *Id.* § 173(1), 42 U.S.C. § 7503(1).

[1156] *Id.* §§ 171(3), 173(2), 42 U.S.C. §§ 7501(3), 7503(2).

[1157] *Id.* § 173(3), 42 U.S.C. § 7503(3).

[1158] *Id.* § 173(4), 42 U.S.C. § 7503(4).

VI. Prevention of Significant Deterioration (PSD) Program

The Clean Air Act requires all SIPs to contain emission limitations and other measures necessary to prevent significant deterioration (PSD) of air quality in attainment areas.[1159] The primary purpose of the PSD program is to protect public health and welfare from actual potential adverse affects reasonably anticipated to occur from air pollution despite satisfaction of national ambient air quality standards.[1160] Section 163 of the CAA requires SIPs to contain provisions for attainment areas insuring that; (1) maximum allowable increases of sulfur oxides and particulate matter in excess of base line concentrations[1161] of those pollutants and (2) maximum allowable concentrations of those air pollutants not be exceeded.[1162]

A three-tiered classification system has been established to limit the amount of deterioration in air quality in attainment areas during annual periods.[1163] All international parks and certain national parks and wilderness areas are designated Class I while areas within the attainment areas that are not designated as Class I are deemed to be within Class II.[1164] Certain of these areas may be redesignated as Class III areas.[1165] The maximum allowable increases of sulfur oxide and particulate matter are higher and therefore there exists less stringent pollutant levels for Class II areas than for Class I areas.[1166] In Class III areas these increases are even higher and therefore the controls are less stringent than for Class II.[1167] The maximum allowable concentration of any air pollutant in an attainment area must not

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[1156] *Id.* § 161, 42 U.S.C. § 7471; *see id.* §§ 107(d)(1) (D)-(E), 42 U.S.C. §§ 7407(d)(1)(D)-(E) (identifying attainment areas within AQCRs in which PSD measures are required).

[1160] *Id.* § 160(1), 42 U.S.C. § 7470(1).

[1161] Base line concentrations are the ambient concentration levels of a pollutant that exist at the time of a first application for a PSD permit. *Id.* § 169(4), 42 U.S.C. § 7479(4); 40 C.F.R. § 51.241(b)(13) (1989).

[1162] CAA §§ 162-63, 42 U.S.C. §§ 7472-73 (1982).

[1163] *Id.* §§ 162-64, 42 U.S.C. §§ 7472-74.

[1164] *Id.* § 162, 42 U.S.C. § 7472.

[1165] *Id.* § 164, 42 U.S.C. § 7474.

[1166] *Id.* § 163(b)(1)-(2), 42 U.S.C. § 7474(b)(1)-(2).

[1167] *Id.* § 163(b)(3), 42 U.S.C. § 7474(b)(3).

exceed the concentration permitted under the primary or secondary NAAQSs, whichever is lower, for the pollutant.[1168] Consequently, Class I attainment areas are intended to be maintained at cleaner air pollutant levels than Class II areas and, likewise, Class II attainment areas are to be cleaner than Class III areas.[1169]

These maximum allowable increases and concentrations are implemented by a PSD pre-construction permit program for major emitting facilities.[1170] These facilities are defined as (1) stationary sources within 28 industrial categories that emit or have the potential to emit 100 tons or more per year of any regulated air pollutant and (2) any other source with a potential to emit 250 tons per year or more of any regulated air pollutant.[1171] The major emitting facilities to which the permit program applies are those which have commenced construction after August 7, 1977.[1172] "Construction, " as used in the PSD provisions of the CAA, means not only initial construction but also subsequent modifications to sources and facilities.[1173] "Potential to emit" is defined in the EPA regulations to mean the maximum capacity of a stationary source to emit a pollutant, given its operational design and taking into account "air pollution control equipment and restrictions on hours of operations or on the type or amount of material combusted, store or processed. . . ."[1174]

The application must meet two primary requirements for a PSD permit. First, the applicant must demonstrate that emissions from construction or operation of the facility will not cause or contribute to air pollution in excess of (1) the maximum allowable increase or maximum allowable concentration for any pollutant in any PSD area, (2) any NAAQS in any AQCR, or (3)

[1168] *Id.* § 163(b)(4), 42 U.S.C. § 7473(b)(4).

[1169] *Id.* §§ 162-64, 42 U.S.C. §§ 7472-74.

[1170] *Id.* § 165(a), 42 U.S.C. § 7475(a).

[1171] *Id.* § 169(1), 42 U.S.C. § 7479(1).

[1172] The date of the Clean Air Act Amendments of 1977, Pub. L. 95-95, 91 Stat. 685 (August 7, 1977).

[1173] CAA § 169(2)(c), 42 U.S.C. § 7479(2)(c) (1982). "Modification" is defined as "any physical change in or change in the method of operation of, a stationary source which increases the amount of any air pollutant emitted by such source or which results in the emission of any air pollutant not previously emitted." *Id.* § 111(4), 42 U.S.C. § 7411(a)(4).

[1174] 40 C.F.R. § 52.20(b)(4) (1989).

any other applicable emissions standards or standards of performance under the CAA.[1175] Secondly, the facility to be constructed must be demonstrated to utilize best available control technology (BACT) for each regulated pollutant which is emitted from the facility.[1176] BACT is defined as an emission limitation based on the maximum degree of reduction of each regulated pollutant emitted.[1177] BACT is applicable to any major emitting facility where the permitting agency determined it to be achievable on a case by case basis.[1178] This determination must take into account energy, environmental and economic impacts as well as other costs.[1179] BACT must achieve at least the applicable emissions standards pursuant to NSPSs[1180] and NESHAPS.[1181] In accordance with federal regulations,[1182] Mississippi has been delegated the PSD program by EPA Region IV[1183] and has submitted a SIP revision for the PSD Program.[1184]

VII. Mississippi Air Regulations

Pursuant to the Mississippi Air and Water Pollution Control Law,[1185] the Mississippi Commission on Environmental Quality has promulgated the following air regulations: (1) Air Emission Regulations,[1186] (2) Regulations for the Prevention of Air Pollution Emergency Episodes,[1187] (3) Permit Regulations

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[1175] CAA § 165(a)(3), 42 U.S.C. § 7475(a)(3) (1982); *see id.* § 165(b), 42 U.S.C. § 7475(b) (exceptions).

[1176] *Id.* § 165(a)(4), 42 U.S.C. § 7475(a)(4).

[1177] *Id.* § 169(3), 42 U.S.C. § 7479(3); 40 C.F.R. § 52.21(b)(12) (1989).

[1178] *Id.*

[1179] *Id.*

[1180] CAA § 111, 42 U.S.C. § 7411 (1982).

[1181] *Id.* § 112, 42 U.S.C. § 7412.

[1182] 40 C.F.R. § 52.21(u) (1989).

[1183] Delegation Letters from EPA Region IV to DEQ, dated June 14, 1979; June 18, 1981 (correcting delegation letter dated May 5, 1981); and May 23, 1988 (date of receipt); *see*, 46 *Fed. Reg.* 35,784 (July 10, 1981); *see also*, letter from EPA Region IV to DEQ dated May 20, 1988 (outlining non-delegated PSD authority).

[1184] 55 Fed. Reg. 41691 (Oct. 15, 1990).

[1185] Miss. Code Ann. §§ 49-17-1 to -43 (Supp. 1990).

[1186] Mississippi Department of Environmental Quality, Bureau of Pollution Control, Regulation APC-S-1 (December 14, 1988 and amended August 23, 1989).

[1187] Mississippi Department of Environmental Quality, Bureau of Pollution Control,

for the Construction and/or Operation of Air Emissions Equipment,[1188] (4) Guidelines for Review of Citing Criteria and Applications for Air, Water and Pollution Control Permits,[1189] and (5) ambient air quality standards.[1190] The Environmental Quality Permit Board issues permits for construction and operation of air emission equipment in the state.[1191]

VIII. Enforcement

A. Federal Enforcement

1. General Enforcement Sanctions

Whenever the EPA finds that a person is in violation of any of the SIP requirements, it must notify that person and the state agency of the violation.[1192] If the violation continues beyond 30 days after the issuance of the notice, EPA may, in its discretion, issue an administrative order requiring compliance with the SIP requirements or bring a civil action.[1193] However, if the violator is an owner or operator of a "major stationary source," EPA is required to commence a civil action.[1194] Whenever EPA finds that a person is in violation of a NESHAP or a NSPS, it may issue an administrative order or commence a civil action.[1195] Violation or failure to comply with an administrative order will give rise to a civil action.[1196] Any civil action instituted by EPA may be brought in the federal district court for the district in which the violation occurred or in which the defendant resides or has its principal place of business.[1197] The court may order a permanent or temporary injunction to enjoin the viola-

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Regulation APC-S-3 (April 25, 1988).

[1188] Mississippi Department of Environmental Quality, Bureau of Pollution Control, Regulation APC-S-2 (December 14, 1988 and amended August 23, 1989).

[1189] Mississippi Department of Environmental Quality, Bureau of Pollution Control, Permit Board Rule 1-82 (July 28, 1987).

[1190] 42 U.S.C. §§ 7401-7642, 84 Stat. 1676 (December 31, 1970).

[1191] Miss. Code Ann. § 49-17-29(3) (Supp. 1990).

[1192] CAA § 113(a)(1), 42 U.S.C. § 7413(a)(1) (1982).

[1193] *Id.*

[1194] *Id.* § 113(b), 42 U.S.C. § 7413(b).

[1195] *Id.* § 113(a)(3), 42 U.S.C. § 7413(a)(3).

[1196] *Id.* § 113(b)(1), 42 U.S.C. § 7413(b)(1).

[1197] *Id.* § 113(b), 42 U.S.C. § 7413(b).

tion or assess a civil penalty of up to $25,000 per day of violation, or both.[1198] In determining the amount of civil penalties to be assessed, the courts are required to take into consideration the size of the business, the economic impact of the penalty on the business, and the seriousness of impact of the penalty on the business, and the seriousness of the violation, and other pertinent factors.[1199]

2. Noncompliance Penalties

In addition to these civil penalties, noncompliance penalties in civil actions may be assessed by EPA.[1200] The intent of this provision permits EPA to recover from a source the economic benefit derived from its failure to comply with applicable regulations.[1201] Sources subject to noncompliance penalties include (1) major stationary sources not in compliance with an emission limitation, emission standard or compliance schedule under any SIP and (2) any source not in compliance with an emission limitation, emission standard or compliance standard for new sources under Section 111 (NSPS) or hazardous pollutants under Section 112 (NESHAP).[1202] Exemptions from noncompliance penalties are available for certain sources,[1203] including noncompliance that is "de minimus in nature and duration."[1204]

After a brief but reasonably specific notice of noncompliance has been given, the noncomplying owner or operator has 45 days to (1) calculate, in accordance with EPA regulations, the amount of the penalty owed and submit a schedule of payments, (2) submit a petition challenging the notice, or (3) allege entitlement to a statutory exemption.[1205] If the owner or operator challenges the notice, he has a right to a formal administrative hearing.[1206] If the owner or operator elects to pay, the penalties must

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[1198] *Id.*
[1199] *Id.*
[1200] *Id.* § 120, 42 U.S.C. § 7420.
[1201] *Id.*
[1202] *Id.* § 120(a)(2)(A), 42 U.S.C. § 7420(a)(2)(A).
[1203] *Id.* § 120(a)(2)(B), 42 U.S.C. § 7420(a)(2)(B).
[1204] *Id.* § 120(a)(2)(C), 42 U.S.C. § 7420(a)(2)(C).
[1205] *Id.* § 120(b)(4)(A) and (B), 42 U.S.C. § 7420(b)(4)(A)-(B).
[1206] *Id.* § 120(b)(5), 42 U.S.C. § 7420(b)(5).

be calculated in accordance with EPA's Instruction Manual and Technical Support Document.[1207] Within 30 days after receipt of the penalty calculation, EPA (or the state if it has been delegated the PSD program) must notify the owner or operator whether the calculation is accepted, rejected, or insufficiently verified.[1208] If the calculation is rejected, the owner or operator may request a formal administrative hearing on the issue of the amount of the penalty.[1209] If the owner or operator does not submit a calculation of the penalty assessment and the necessary verification information, EPA (or the delegated state) may hire a contractor to calculate the penalty and then charge the owner or operator for the contractor's costs, in addition to the penalties.[1210]

3. Self-Monitoring and Inspection

In order to determine compliance and the need for enforcement, EPA is authorized to require self-monitoring and disclosure by stationary sources and to enter the premises of such sources to inspect records, monitoring equipment, and control methods.[1211]

4. Criminal Sanctions

The Clean Air Act provides for criminal penalties under certain circumstances.[1212] Fines up to $25,000 per day of violation and imprisonment for not more than one year, or both may be levied against any person who "knowingly" violates (1) a SIP requirement during a period of EPA enforcement or more than 30 days after EPA notice, (2) an order to comply with a SIP requirement, (3) an NSPS or NESHAP requirement or (4) certain other requirements including those requirements for noncompliance penalties.[1213] The penalties for second offenses are

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[1207] 40 C.F.R. § 66.21 (1989).
[1208] *Id.* § 66.51.
[1209] *Id.* § 66.51(a)(2).
[1210] CAA § 120(c), 42 U.S.C. § 7420(c) (1982).
[1211] *Id.* § 114(a), 42 U.S.C. § 7414(a).
[1212] *Id.* § 113(c), 42 U.S.C. § 7413(c).
[1213] *Id.* § 13(c)(1), 42 U.S.C. § 7413(c)(1).

$50,000 per day and up to two years imprisonment, or both.[1214] "Person" is defined to include "any responsible corporate officer."[1215]

B. State Enforcement

The CAA requires a state to enforce the requirements of its SIP.[1216] SIPs must include requirements for installation of monitoring equipment by owners or operators of stationary sources, and provides for periodic emission reports that are available for public inspection.[1217] If a state fails to effectively enforce its SIP such that violations are widespread, EPA is authorized to assume enforcement authority after 30 days notice to the state.[1218] With regard to enforcement of the NSPS and NESHAP programs, EPA has primary enforcement responsibility, but the states may be delegated responsibility.[1219] Mississippi has been delegated enforcement of the NSPS and NESHAPS programs, as well as fulfilling its obligation for enforcement of the SIP, including the PSD program.[1220]

C. Citizen Suits

The CAA authorizes "any person" to commence a civil action in the federal district courts against (1) any person (including a governmental entity) alleged to be in violation of an emission standard or limitation,[1221] or an order issued by EPA or a

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[1214] *Id.*

[1215] *Id.* § 113(c)(3), 42 U.S.C. § 7413(c)(3).

[1216] *Id.* §§ 110(a)(2)(F), (116), 42 U.S.C. §§ 7410(a)(2), 7416.

[1217] *Id.* § 100(a)(2)(F), 42 U.S.C. § 7410(a)(2)(F).

[1218] *Id.* § 113(a)(2), 42 U.S.C. § 7413(a)(2).

[1219] *Id.* §§ 111(c)(1), 112(d)(1), 42 U.S.C. §§ 7411(c)(1)-7412(d)(1).

[1220] *See* Implementing the State/Federal Partnership in Enforcement: State/Federal Enforcement for the Air Medium, Fiscal Year 1990, between EPA Region IV and State of Mississippi; notes 1170, 1174, 1224 (delegation letters and Federal Register references for NSPS, NESHAPS and PSD programs). Under the Air and Water Pollution Control law, violators can be subject to civil penalties up to $25,000 per day per violation, as well as injunctive relief and natural resource restoration costs. MISS. CODE ANN. § 49-17-43 (Supp. 1990).

[1221] CAA § 304(f), 42 U.S.C. § 7604(f) (1982). The term "emission standards" or limitation is defined, for purposes of the citizen suit provisions, as including "a schedule or timetable of compliance, emission limitation, standard of performance, or emission standard," permit requirements under the nonattainment and PSD provisions, and require-

state with respect to that standard or limitation, (2) EPA where it is alleged that it failed to perform a nondiscretionary act or duty, or (3) any person who violates a PSD or nonattainment permit requirement.[1222] Prior to the filing of the citizen suit, 60 days notice must be given to EPA, the agency of the state in which the violation occurs, and the alleged violator.[1223] If EPA or the state agency has commenced and is "diligently prosecuting" a civil action to require compliance, the citizen may not commence a new action but may intervene as a matter of right in any federal court enforcement action.[1224] The court may award the costs of litigation, including reasonable attorney and expert witness fees, to any party whenever it is determined such an award is appropriate.[1225]

FEDERAL INSECTICIDE, FUNGICIDE, AND RODENTICIDE ACT (FIFRA)

Publication of *Silent Spring* by Rachel Carson is frequently seen as playing a pivotal role in changing public sentiment with respect to the use of pesticides in the United States. In the late 1940's and early 1950's, the slogan, "better living through chemistry," summarized the public perception of chemical pesticides. In her book, Ms. Carson vividly called to the nation's attention the potential dangers of these materials.[1226]

Pesticides have been regulated to some degree since 1910,[1227] with the principal early statute being the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) of 1947.[1228] Responding to a growing concern by the population over the use of pesticides, Congress passed a significantly revised version of FIFRA in 1972.[1229] The Act was subsequently amended in 1975,

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ments of enforcement orders under § 113 and primary nonferrous smelter odors under § 119. *Id.*

[1222] CAA § 304(a), 42 U.S.C. § 7604(a) (1982).

[1223] *Id.* § 304(b)(1)(A), 42 U.S.C. § 7604(b)(1)(A).

[1224] *Id.* § 304(b)(1)(B), 42 U.S.C. § 7604(b)(1)(B).

[1225] *Id.* § 304(d), 42 U.S.C. § 7604(d).

[1226] R. CARSON, SILENT SPRING (1962).

[1227] 36 Stat. 331 (1910).

[1228] 61 Stat. 163 (1947).

[1229] 7 U.S.C. §§ 1361364 (1976).

1978, 1980, and 1988.[1230] The current FIFRA establishes requirements for the registration, classification, labeling, packaging, storage and disposal of pesticides as well as the certification of applicatiors. Each of these components will be briefly discussed below.

I. REGISTRATION

FIFRA requires that all substances to be used as pesticides be registered with the EPA before their introduction to the marketplace.[1231] Generally, the EPA will register a pesticide if it determines that the product performs as promised, is labelled appropriately, and does not unreasonably and adversely affect the environment when used normally.[1232] The Act also provides that a pesticide's registration is automatically cancelled after five years unless the manufacturer requests a continuation of the registration.[1233] Such a continuation will be granted and the pesticide will be reregistered for another five years if the continued use of the pesticide does not present unreasonably adverse effects on the environment.[1234] The EPA is also authorized to suspend a pesticide's registration at any time during registration if there is an "imminent hazard."[1235] The manufacturer is entitled to an expedited hearing prior to suspension, unless the EPA determines that there is an emergency.[1236]

The registration of pesticides in Mississippi is now governed by the Mississippi Pesticide Law of 1975.[1237] Any pesticide not properly registered under this law is subject to immediate

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[1230] Pub. L. No. 92-516, 85 Stat. 973 (1972); Pub. L. No. 94-140, 89 Stat. 751 (1975); Pub. L. No. 95-396, 92 Stat. 819 (1978); Pub. L. No. 96-539, 94 Stat. 3194 (1980).

[1231] 7 U.S.C. § 136a(a) (1988).

[1232] *Id.* § 136a(c)(5). To satisfy those elements, the manufacturer must submit data supporting their claims. *Id.* § 136a(c)(2). For the EPA data requirements for registration, see 40 C.F.R. §§ 158.20-.85 (1989).

[1233] 7 U.S.C. § 136d(a)(1) (1988).

[1234] *Id.* When the EPA finds a harmful and unjustified effect on the environment, the EPA may notify the public that it intends to cancel the registration of a certain pesticide or that it will hold a hearing before making a final cancellation determination. *Id.* § 136d(b).

[1235] *Id.* § 136d(c)(1).

[1236] *Id.* § 136d(c)(2), (3).

[1237] MISS. CODE ANN. § 69-23-1 to -27 (Supp. 1990).

seizure.[1238] Pursuant to its statutory authority,[1239] the Mississippi Department of Agriculture and Commerce, Division of Plant Industry has promulgated regulations for the registration of pesticides.[1240]

II. Classification

Because some pesticides are too toxic for general household or agricultural use, FIFRA requires the classification of pesticides to ensure proper handling and application.[1241] Those pesticides which present an unreasonable adverse effect on the health of the applicator or the environment will be classified as "restricted use" pesticides while all others will be classified as "general use."[1242] The regulations provide that a pesticide will be classified for restricted use when it presents a health hazard to humans or other wildlife, when proper labeling cannot ensure safe use, and when the benefits of restriction exceed the drawbacks.[1243] General use pesticides may be purchased by the general public, while restricted use substances can only be used by "certified applicators," to be discussed later.[1244]

III. Labeling and Packaging

Another significant element of FIFRA is the establishment of labeling and packaging standards. Generally, each pesticide label must contain the product name, the producer, the EPA registration number, and a statement of the ingredients.[1245] The label must also include one of the signal words, "Danger," "Warning," or "Caution," depending upon the toxicity of the pesticide.[1246] Finally, every label must specify the directions for

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[1238] *Id.* § 69-23-21(b).

[1239] *Id.* § 69-23-9.

[1240] Mississippi Dep't of Agriculture and Commerce, Division of Plant Industry, Regulations Governing Registration of Economic Poisons in Accordance with the Mississippi Economic Poisons Act.

[1241] 7 U.S.C. § 136a(d)(1) (1988).

[1242] *Id.*

[1243] 40 C.F.R. § 152.170 (1989); *see also id.* § 152.175 (listing restricted pesticides).

[1244] 7 U.S.C. § 136a(d)(1) (1988).

[1245] 40 C.F.R. § 156.10 (1989).

[1246] *Id.* § 156.10(h).

the pesticides' use, to include the use classification, the pests and crops involved, the dosage rate, and storage and disposal requirements.[1247] Pesticides used in the household and meeting certain toxicity levels must also be packaged in child-resistant containers.[1248] Restricted use pesticides and those packaged in large sizes, however, are exempt from this requirement.[1249]

IV. Storage and Disposal

FIFRA mandates that the EPA regulate the storage and disposal of pesticides and their containers.[1250] EPA regulations prohibit the disposal of any pesticide by a method not consistent with that described on the label.[1251] Open dumping, open burning, and water dumping are explicitly prohibited.[1252] Proper disposal methods include incineration in a pesticide incinerator, burial at a special landfill, or chemical degradation.[1253] For the most toxic of pesticides, the pesticide container must also be burned in a pesticide incinerator or buried in a specially designated landfill.[1254] Containers holding less toxic substances may be triple-rinsed and reused by the manufacturer or disposed of in an approved landfill.[1255] If none of the above disposal methods are immediately available, the regulations provide for the storage of pesticides and their containers.[1256] In general, the stored pesticides must be labeled with appropriate warnings and placed at a site that is well ventilated and not subject to flooding.[1257] Various safety precautions, protective clothing, and fire control methods are also advocated.[1258]

[1247] *Id.* § 156.10(i).
[1248] *Id.* § 157.22.
[1249] *Id.* § 157.24.
[1250] 7 U.S.C. § 136q(a) (1988).
[1251] 40 C.F.R. § 165.67 (1989).
[1252] *Id.*
[1253] *Id.* § 165.8.
[1254] *Id.* § 165.9.
[1255] *Id.*
[1256] *Id.* § 165.10.
[1257] *Id.*
[1258] *Id.*

V. Certification of Applicators

FIFRA requires that "restricted use" pesticides be applied only by "certified applicators."[1259] The EPA has established standards for the certification of commercial and private applicators.[1260] Each state, however, may take over the certification program if it can guarantee that the federal standards will be adequately maintained and enforced.[1261] The Mississippi Department of Agriculture and Commerce, Division of Plant Industry has been delegated, pursuant to the Mississippi Pesticide Application Law of 1975,[1262] responsiblity for the licensing and certification of applicators by the EPA.[1263]

Conclusion

The authors hope that the foregoing overview will provide a helpful foundation to the general practitioner who has not previously received an introduction to environmental law on this level. We feel compelled to point out that this article is intended as an overview — it only scratches the surface of the other materials necessary to address a particular environmental issue. Additionally, we point out that environmental law — the enactment of statutes, promulgation of regulations, issuance of policy and guidance documents and rendering of court decisions —is ever changing and expanding. Therefore, the foregoing introduction can report to be only a "snapshot" of current law. In any event, we hope that the article will enable the general practitioner to better identify environmental issues in his practice that require investigation and also serve as a motivation for deeper study and understanding of environmental law.

[1259] 7 U.S.C. § 136i(a)(1) (1988).

[1260] 40 C.F.R. §§ 171.4-.5 (1989).

[1261] 7 U.S.C. § 136i(a)(2) (1988).

[1262] Miss. Code Ann. § 69-23-101 to -133 (Supp. 1990).

[1263] *Id.* § 69-23-111. For a more specific view of certification requirements, see Regulations Governing the Certification of Private Applicators to Use "Restricted Use" Pesticides; Regulations Governing Pest Control Applicators.

THE EMERGENCE OF REGIONAL LANDFILLS IN MISSISSIPPI

*John Hampton Stennis**
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On August 30, 1988, the Environmental Protection Agency (EPA) expanded the federal role in landfill regulation by proposing specific regulatory criteria for municipal solid waste landfills (MSWLFs).[1] These proposed regulations will be referred to throughout this article as "the Proposed Criteria." The Proposed Criteria, in whatever form finally adopted, will supersede much less stringent state regulations in Mississippi.[2] The Pro-

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[1] 53 Fed. Reg. 33,314-422 (1988) (to be codified at 40 C.F.R. §§ 257, 258 (proposed Aug. 30, 1988) [hereinafter *Proposed Criteria*]. The Hazardous and Solid Waste Amendments of 1984 ("HSWA") to the Resource Conservation and Recovery Act ("RCRA") direct the EPA to keep current regulations for facilities receiving household hazardous waste and small quantity generator hazardous waste. U.S. EPA Office of Solid Waste, Proposed Revisions to Criteria for Municipal Solid Waste Disposal Facilities: A Summary at 1 (Aug. 22, 1988) [hereinafter *EPA Summary*]. Although the regulations are directed toward the disposal of non-hazardous waste, some household hazardous waste, such as household cleaners, paint thinners, and pesticides, are disposed of in common landfills. *Proposed Criteria* at 33,318.

The applicability of the *Proposed Criteria* is not limited to landfills owned by cities. A "municipal solid waste landfill" is defined as any publicly or privately owned "new or existing landfill or landfill unit that receives household waste." *Proposed Criteria* at 33,329.

[2] Mississippi's landfill regulations are published as the Bureau of Pollution Control, Miss. Dept. of Natural Resources, Nonhazardous Waste Management Regulations, Reg. No. PC/S-1 (1988) [hereinafter *Regulations*].

The *Proposed Criteria* replace federal regulatory criteria for landfills published on September 13, 1979, at 40 C.F.R. pt. 257. Generally, the old criteria set minimum performance standards to guarantee that "no reasonable probability of adverse effects on health or the environment" will result from solid waste disposal practices. If the facility fails to meet these old criteria, it is deemed an "open dump."

posed Criteria set minimum standards for the location, design, operation, cleanup, and closure of MSWLFs. A landfill failing to satisfy these requirements will be deemed an open dump and will subject the owner or operator of any such facility to civil liability or injunctive relief.[3] Citizens will have a private cause of action to enforce the new regulations.[4]

The Proposed Criteria are significant because they will replace federal performance standards that lack specificity. For example, with respect to groundwater protection, the old criteria merely provide that the landfill cannot "contaminate an underground drinking water source beyond the solid waste boundary . . . ."[5] The Proposed Criteria go beyond this general performance standard by mandating installation of a groundwater monitoring system and the implementation of sampling procedures.[6]

The Proposed Criteria are also significant because of their comprehensive applicability. Mississippi landfills that predate existing state regulations may be grandfathered in under older, less stringent regulations.[7] In contrast, the only landfills exempted from the Proposed Criteria are those that are closed[8] prior to the effective date of the regulations.[9] Landfills closed prior to the effective date of the new regulations will be governed by the Mississippi Department of Environmental Quality's existing regulations.[10]

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[3] *Proposed Criteria*, *supra* note 1, at 33,328. RCRA § 4005 provides in part that "any solid waste management practice or disposal of solid waste or hazardous waste which constitutes the open dumping of solid waste is prohibited . . . ." 42 U.S.C. 6945 (1984).

[4] *Proposed Criteria*, *supra* note 1, at 33,382-83 (citing 42 U.S.C. § 6972 (1984)).

[5] Criteria for Classification of Solid Waste Disposal Facilities & Practices, 40 C.F.R. §§ 257.3-.4 (1987).

[6] *Proposed Criteria*, *supra* note 1, at 33,367.

[7] *See Regulations*, *supra* note 2, § B.2 ("All existing facilities permitted prior to the date of these regulations may continue to operate under the conditions set forth in the existing permit, until such time as the Permit Board determines it necessary to modify, revoke, and/or reissue a permit that more completely complies with the regulations as set forth herein.")

[8] A landfill is "closed" if it no longer receives solid waste and has a final cover. "[T]he owner or operator cannot escape these regulations by simply refusing to accept additional waste and abandoning the MSWLF." *Proposed Criteria*, *supra* note 1, at 33,328.

[9] *Id.*

[10] Sigman & Vinson, *Closing a Landfill*, MISS. MUNICIPALITIES, May 1989, at 8 [here-

The new regulations will become effective eighteen months after being promulgated in final form.[11] The final version of the regulations was expected in the spring of 1990.[12] The Proposed Criteria are expected to be amended. However, the extent and form of those modifications are not known.[13]

I. Dawning of a New Era of Regional Landfills in Mississippi

The Proposed Criteria will significantly increase construction, maintenance and operation costs for landfills.[14] This will have two effects: closure and regionalization. Smaller landfills accepting less than twenty tons per day particularly are expected to be replaced by regional landfills because of the financial burden imposed by the Proposed Criteria's requirements for continuous groundwater monitoring, closure, and post-closure monitoring.[15] As less populated and less affluent Mississippi cities and counties are forced out of the landfill business, larger regional facilities will be constructed.[16]

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inafter Sigman & Vinson]. *See Regulation, supra* note 2, § D.2 (closure guidelines).

[11] *Proposed Criteria, supra* note 1, at 33,381.

[12] Semi-Annual EPA Regulatory Agenda, 54 Fed. Reg. 45,272, 45,316 (1989).

The final rule was expected to be published much earlier. In September of 1988, the EPA predicted that the final rule would be issued by September of 1989. *EPA Proposal on Landfill Requirements Does Not Require Liners, Leachate System,* 19 Env't Rep. (BNA) 760 (Sept. 2, 1988). However, the public comment period on the proposed regulations was extended to November 30, 1988. 53 Fed. Reg. 41,210 (1988).

[13] Bruce Weddle, director of the EPA's solid waste program, and Mike Flynn, acting chief of the criteria assessment group in the program, said that more than 250 comments were received during the public comment period. The comments dealt predominantly with the proposed landfill design standards, the groundwater monitoring requirements, and the financial assurance requirements. *EPA Gets 250 Comments on Landfill Proposal; Design, Groundwater, Financial Sections Hit* 19 Env't Rep. (BNA) 1654, 1655 (Dec. 16, 1988).

[14] Mississippi Envtl. Protection Council, Report to the Mississippi Legislature of 1989, at 24 (Jan. 1989) [hereinafter Report].

[15] Address by Bruce Weddle, Annual Legislative Conference of the National Ass'n of Counties (Mar. 6, 1989), *reprinted in* 19 Env't Rep. 2365 (Mar. 10, 1989).

[16] *See* Clarion Ledger (Jackson, Miss.) Oct. 22, 1989, at 17A, col. 2, interview with Nolan Aughenbaugh, geological engineer at University of Mississippi ("Regional efforts are a must. I don't see a community other than big cities complying with the *Proposed Criteria* by themselves. The fighting between counties and cities will have to be dropped."); Billy Warden, Remarks at Meeting of Southwest Mississippi Resource Conservation & Development Area (Oct. 18, 1989) *reprinted in* Daily Leader (Brookhaven,

There are currently 102 municipal landfills in Mississippi. At most, it is expected that only twenty-five will survive the increased regulatory and financial burdens imposed by the Proposed Criteria.[17] The impact of the Proposed Criteria on the City of New Albany's landfill illustrates the extent of change that will be imposed by the new regulations. New Albany's 241-acre landfill, built in 1987, is regarded as one of Mississippi's best.[18] Although the New Albany landfill has a groundwater monitoring system, the Proposed Criteria will dictate installation of a leachate collection system and methane gas monitoring system.[19] Likewise, the City of Jackson's landfill will also require expensive improvements including installation of a leachate collection and treatment system and a methane gas monitoring system.[20]

Other landfills will be forced to cease operating because of soil, air, or water contamination. Nearly 200 MSWLF sites nationwide are either listed or proposed for listing on the Superfund National Priorities List.[21] There are about 2,000 other municipal landfills that are also identified as sources of contamination. Cleanup costs for these sites have been estimated to reach $80 billion, or tenfold the amount budgeted for the Superfund.[22]

Miss.), Oct. 19, 1989, at 1, col. 5 [hereinafter Warden]. ("If several counties are working together, they can afford a landfill in compliance with the *Proposed Criteria*. The age of having one in every beat or in every county, I think, is over").

[17] Clarion Ledger, Oct. 22, 1989, at 17A, col. 2; Warden, *supra* note 16, at 1, col. 4-5.

Other states are expecting widespread landfill closures as well. For example, Wisconsin natural resources officials estimate that the new criteria will force closure of up to 600 Wisconsin landfills. *Up to 600 Wisconsin Landfills Expected to Close Because of EPA Rule*, 19 Env't Rep. 2551 (Mar. 31, 1989).

[18] Clarion Ledger, Oct. 22, 1989, at 1B, col. 1.

[19] *Id.* at 2B, col. 1.

[20] *Id.* at 17A, col. 3.

[21] *Proposed Criteria*, *supra* note 1, at 33,319. Sites listed on the Superfund National Priorities List are sites where "hazardous substances" have been detected and, pursuant to the EPA's Hazard Ranking System, 40 C.F.R. pt. 300, App. A, have been prioritized for clean up. No Superfund monies may be allocated to clean-up sites that are absent from the National Priorities List. *See* 42 U.S.C. § 9604(a)(1) (requiring federal cleanup actions to be "consistent with" National Contingency Plan, which includes National Priorities List).

[22] Bernstein, *To Clean Up Landfills, the Leader Should Be Municipalities Using Economic Incentives to Settle*, 19 Envtl. L. Rep. (Envtl. L. Inst.) 10,012 (Jan. 1989).

Still other landfills will reach capacity and close. From 1960 to 1986, garbage collections in the United States increased from 87 million tons to 157 million tons per year.[23] Nationally, approximately seventy percent of existing MSWLFs were operating before 1980.[24] Of these existing landfills, the EPA estimates that half will reach capacity and close within five years.[25]

Implementation of the new regulations will begin at a time when Mississippi landfills are reaching capacity and open dumps are being forced to shut down. Even under the current regulations, the remaining permitted landfill life in each county is only six years.[26] Seven Mississippi counties have no permitted landfills, and twenty-six counties do not have county-wide garbage collection. This partly explains the dumping of about 1.4 million pounds of solid waste each day into about eighty-eight large, unpermitted, open dumps in the state.[27]

II. Overview of the EPA's Proposed Criteria and Existing State Regulations

Specifically, the replacement of local landfills with regional landfills will be forced by the imposition of expensive design requirements. As will be summarized below, the new regulatory criteria will mandate that landfills meet a higher degree of design sophistication to avoid surface water or ground water pollution. Personnel manning the landfill will be required to have a higher degree of technical equipment and to detect and exclude the dumping of hazardous waste at the site.[28] The financial burden on the facility's owner or operator will be increased even further by post-closure maintenance spanning decades and by requirements that the owner or operator provide evidence to the

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[23] Introduction, *Symposium on Waste Management Law & Policy*, 18 Envtl. L. 665 (1988). It is estimated that Mississippi generates more than 10,000,000 pounds of solid waste per day. Report, *supra* note 14, at 3.

[24] *Proposed Criteria*, *supra* note 1, at 33,319.

[25] 19 Env't Rep. (BNA) 760 (Sept. 2, 1988).

[26] Report, *supra* note 14, at 23. Also, there is an average of only 22 acres of permitted landfill space remaining per county. *Id.*

[27] *Id.*

[28] Joyce & Neal, *Are You Certified to Handle Your Landfills?*, World Wastes, May 1989, at 24.

state that it can meet certain financial viability criteria. Even the siting of new landfills will necessitate regional cooperation since sites available for landfills will be further limited by the new regulations.

Landfill Siting

Of course, landfill siting has always been and will continue to be a highly political question. Although public opposition to the construction of new landfills has decreased, still only twenty-nine percent of the United States population would approve of a landfill sited in their community.[29] However, the siting issue has become more of a question to be addressed by engineers. A geotechnical engineering investigation is needed to determine, among other things, groundwater flow direction, water table elevation, and soil and aquifer characteristics.[30]

The Proposed Criteria contain special restrictions applicable to landfills sited in the vicinity of airports, 100-year flood plains, wetlands, fault areas, seismic impact zones, and unstable areas.[31] The state regulations prohibit landfill siting in the close proximity of airports[32] and homes.[33]

Financial Assurance

The Proposed Criteria's financial assurance requirements will force many local governmental units out of the landfill busi-

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[29] *NSWMA Finds Flood of New State Recycling Laws, Easing of Public Opposition to New Landfill Sites*, 20 Env't Rep. (BNA) 1326 (Nov. 24, 1989) (reporting results of survey sponsored by the National Solid Waste Management Association). The survey concluded that the percentage of the public opposed to the construction of new landfills has decreased from 65% in 1988 to 56% in 1989. *Id.*

[30] Lee & Sigman, *The Future of Landfills in Mississippi*, Miss. Supervisor, Oct. 1988, at 2 [hereinafter *Lee & Sigman*]. Existing state regulations require the applicant for a landfill permit to include a "Hydrological and Geological Investigation Report which adequately characterizes the surface and subsurface hydrology of the site." *Regulations*, *supra* note 2, § B.10.

[31] *Proposed Criteria*, *supra* note 1, at 33,329-35.

[32] *Regulations*, *supra* note 2, § D.1. Generally, a new landfill cannot be located within 10,000 feet of an airport runway. *Id.*

[33] *Id.* § D.2. The landfill boundary must be a minimum of 300 feet from any inhabited dwelling, and a buffer zone of 150 feet must separate the landfill boundary and disposal operation. *Id.*

ness. The owner or operator of a new or existing landfill must demonstrate to the state that the owner or operator[34] has the financial resources to pay estimated costs for landfill closure, post-closure maintenance[35] and corrective action for known releases.[36] These cost estimates must be "site specific" and cannot be conservatively computed.[37]

The Proposed Criteria allows states to decide what financing mechanisms may be used to provide this financial assurance.[38] Essentially, the chosen mechanism must ensure that sufficient funds will be available when needed.[39] The EPA has set out a non-exclusive list of approved mechanisms including trust funds, surety bonds, letters of credit, and closure insurance.[40]

Surface Water Protection

The Proposed Criteria also require design or modification of

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[34] Proposed Criteria, *supra* note 1, at 33,347. Both the owner and operator are ultimately responsible for providing the financial assurance. But if they are different entities, only one is required to satisfy these requirements. *Id.* at 33,348.

[35] The financial assurance requirements are particularly significant in that they require the owner or operator to show that it can pay post closure maintenance costs which, as will be discussed below at notes 34-40 and accompanying text, will span a minimum of 30 years.

[36] *Proposed Criteria, supra* note 1, at 33,347. Owners and operators that are federal or state entities are exempt from the financial assurance requirements. *Id.* Cities and counties, although political subdivisions of the state, are not exempt. *Id.* at 33,348.

The *Proposed Criteria* do not require the owner or operator to prove its financial capacity to cover certain significant prospective costs. *Id.* at 33,347. These excluded costs include outlays for unknown releases and potential liability to third persons. *Id.*

[37] *Id.* at 33,349. The estimate must derive from the cost of hiring a third party to perform the closure, conduct post-closure maintenance, and clean up the known releases. *Id.* The cost of closure must be computed assuming that closure occurs at the point in the landfill's life when closure would be most expensive. *Id.*

[38] *Id.* at 33,349.

[39] *Id.* at 33,350.

[40] *Id.* However, the EPA makes it clear that these mechanisms must be "properly drafted." *Id.* The trust fund is particularly attractive to small owners and operators because the EPA allows the owner or operator to build up the trust fund over the landfill's active life by making periodic payments. *Id.*

The owner or operator may secure an exemption from the financial assurance requirements by annually passing a financial test set out in the regulations. *Id.* at 33,351. The financial test assures the owner's or operator's financial capacity to pay the necessary costs without earmarking those funds under one of the mechanisms set out above. *Id.*

landfills to avoid surface water contamination. First, the landfill must be sloped or contoured, or must contain ditches, culverts, or dikes to prevent the flow of rainwater onto the active portion of the MSWLF during a twenty-five-year storm.[41] Likewise, the landfill operator must maintain a run-off control system to prevent the release of water resulting from a twenty-four-hour/twenty-five-year storm.[42] Mississippi currently requires surface water monitoring in some situations.[43]

Liners and Leachate Collection Systems

Landfill liners and leachate collection systems will be installed at virtually all new landfills.[44] Liners, which bound the landfill's sides and base, may be either natural or synthetic. If the landfill is sited in an area of impermeable soil or clays, the soil or clay may serve as a natural liner for the landfill.[45] Missis-

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[41] *Id.* at 33,338-39. The state regulations are somewhat less restrictive: "The site shall be protected from flooding with suitable levees constructed to provide protection from a 100-year frequency flood." *Regulations*, *supra* note 2, § D.6.

[42] *Proposed Criteria, supra* note 1, at 33,339. The *Proposed Criteria, supra* note 1, at § 258.27 prohibit the MSWLF from causing a discharge of "pollutants" into the "waters of the United States" in violation of the Clean Water Act. *Id.* This prohibition bars virtually any run-off. The Clean Water Act broadly defines a "pollutant" as "dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste discharged into water." Federal Water Pollution Control Act § 502(6), 33 U.S.C. § 1362(6) (1982). As one commentator observes, the broad wording of the definition indicates Congress' intent to keep water clean of any impurities whatsoever: "The congressional purpose was to identify expansively and anticipate all the physical 'stuff' that could end up in the wrong place to the detriment of water quality." W. Rodgers, Environmental Law: Air & Water § 4.10 (1986). The "waters of the United States" are no longer limited to navigable waters. *Id.* § 4.12.

[43] *Regulations, supra* note 2, § D.17.

[44] Whereas the Proposed Criteria would indirectly mandate liners and leachate collection systems, the state regulations expressly require them for virtually all new landfills. *See* State of Mississippi, Landfill Geology & Hydrogeology Policy, § I, III (Feb. 4, 1988) [hereinafter Landfill] (establishing state liner and leachate collection system requirements). The significance of the Proposed Criteria is that they impose these requirements on new and existing landfills. *Proposed Criteria*, *supra* note 1, at 33,328.

[45] *Lee & Sigman*, *supra* note 30, at 2. Natural liners must have a minimum thickness of five feet. Landfill, *supra* note 44, § I.A. The Proposed Criteria will force areas of Mississippi in which sandy soils or highly permeable clays predominate to use expensive synthetic liners. An on-site geotechnical engineering investigation can address the feasibility of a natural liner. *Id.* at 2.

sippi allows a combination synthetic/soil liner composed of both a forty-mil-thick synthetic liner and a natural or recompacted soil liner of at least three feet thick.[46]

Surface water becomes "leachate" when it flows into the landfill contents and reaches the floor of the landfill.[47] A leachate collection system normally consists of piping constructed along the bottom of the landfill. The piping system collects the leachate and transports it to the on-site treatment station or to some interim facility from which it is removed to an off-site wastewater treatment facility.[48] In 1984, only one percent of all landfills had synthetic liners and only eleven percent had leachate collection systems.[49] However, Mississippi generally requires a leachate collection system in all new landfills.[50]

The Proposed Criteria do not expressly mandate liners or leachate collection systems.[51] Practically, however, liners and leachate collection systems will be the rule rather than the exception. The Proposed Criteria delegate to the states the authority to adopt risk-based landfill "design goals." That is, each new landfill must be designed to keep cancer risks to the populace at a predetermined minimum. Thus, liners and leachate collection systems are "mandated" if needed to meet the goal.[52]

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[46] LANDFILL, *supra* note 44, § I.C.

[47] Existing state regulations define "leachate" as "liquid that has passed through or emerged from solid waste and contains soluble, suspended or miscible materials removed from such waste." *Regulations, supra* note 2, § A.1.h.

[48] *Lee & Sigman, supra* note 30, at 2. Off-site treatment of leachate is generally more economical because the landfill owner avoids capital costs. *Id.* The leachate collection system must operate for years after the landfill is closed since the landfill will continue to produce leachate. *Id.*

[49] *Proposed Criteria, supra* note 1, at 33,318. Existing landfills are not required to install liners or leachate collection systems. *EPA Summary, supra* note 1, at 7. The physical impossibility of such a requirement is obvious. However, to compensate for this deficiency, existing landfills will have to install a final cover that prevents seepage of rainwater into the landfill contents. *Id.*

[50] LANDFILL, *supra* note 44, § III.

[51] 19 Env't Rep. (BNA) 760 (Sept. 2, 1988).

[52] *Id.* The "design goal" limits the risk of cancer deaths to a certain range. States may set design goals so that the risk of cancer to someone exposed to the landfill over a lifetime is between one in 10,000 to one in 1,000,000. *EPA Summary, supra* note 1, at 6; 19 Env't Rep. (BNA) 1211 (Oct. 21, 1988).

Bruce Weedle, Director of EPA's Solid Waste Program, acknowledged that these mechanisms are not mandated but emphasized that "the days of operating without liners

Methane Gas Monitoring

The decomposition of organic waste generates methane, a gas which is explosive at high concentrations.[53] The Proposed Criteria add a landfill gas monitoring requirement to the existing methane concentration limits.[54] Subsurface and facility-structure gas monitoring must be conducted at least quarterly.[55] Nationally, only four percent of existing landfills have methane control or monitoring systems.[56] Mississippi's existing regulations require a "gas control system" only when the property will be the site for a building or recreational park following closure.[57]

Groundwater Monitoring

The EPA sees groundwater contamination as a major threat posed by landfills. Where groundwater contamination has been confirmed in the vicinity of MSWLFs, the most commonly existing contaminates are iron, chloride, manganese, trichloroethylene, benzene and toluene.[58] Older landfills positioned near

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and leachate collection systems [are] drawing to a close." 19 Env't Rep. (BNA) 2366 (Mar. 10, 1989) (quoting from interview with Bruce Weddle, EPA Solid Waste Program Director). He said that the *Proposed Criteria* "really does" require liners and collection systems: "If you read the proposal, areas with specific climatic conditions, such as a big rainfall, will require these systems. And citizens will demand the extra protections unless the landfill is in an extremely arid place." *Id.*

[53] *Proposed Criteria, supra* note 1, at 33,319. It is estimated that over half of landfill-generated gas is methane. *Id.* at 33,318. Methane apparently remains trapped in landfills indefinitely. William Rathe, anthropology professor and director of "the Garbage Project" at the University of Arizona, reports that an excavation of a 1,600-year-old Roman dumpsite released enough methane to require gas masks. *Garbage "Stored" In Municipal Landfills Shows Little Decomposition, Archaeologist Says*, 19 Env't Rep. (BNA) 2368-69 (Mar. 10, 1989).

[54] MSWLF concentration of methane cannot exceed 25% of the "lower explosive limit" (LEL) in the facility structures or at the landfill property boundaries. *Proposed Criteria, supra* note 1, at 33,336. The LEL is defined as "the lowest percent, by volume, of that gas in a mixture of explosive gases that will propagate a flame in air at 25C and atmospheric pressure at sea level." *Id.*

[55] *Id.* at 33,336-37.

[56] 19 Env't Rep. (BNA) 1247-48 (Oct. 28, 1988) (reporting results of EPA's most recent (1984) state survey of landfills).

[57] *Regulations, supra* note 2, § D.7. Even in these limited instances, a "gas control system" may not be required by the state. *Id.* "Installation of such a system may be delayed until significant gas releases have been detected or until final closure procedures are initiated." *Id.*

[58] *Proposed Criteria, supra* note 1, at 33,319. The EPA lists trichloroethylene, ben-

groundwater tables and surrounded by highly permeable soils most often present high risks.[59] Thus, the Proposed Criteria mandate groundwater monitoring for both new and existing[60] landfills.

The Proposed Criteria establish two phases of groundwater monitoring requirements. Groundwater monitoring is such an integral part of the new regulations that, to an extent, it dictates the location of the landfill. If the MSWLF is located or is to be located where subsurface conditions prevent monitoring, the landfill will remain unpermitted.[61] In Phase I of the facility's groundwater monitoring, the owner or operator monitors for specified constituents.[62] A cleanup and Phase II monitoring requirements are triggered if Phase I monitoring detects contamination.[63] If contamination persists at Phase II, the Proposed Criteria require corrective action. The State will set the standards and schedule for the cleanup.[64]

Hazardous Waste Exclusion

Landfill operators will be obligated to take steps to prevent the entry of hazardous wastes on site. The Proposed Criteria re-

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zene and toluene as "hazardous wastes". 40 C.F.R. § 261.33 (1989).

[59] *Proposed Criteria, supra* note 1, at 33,319.

[60] Each state must establish a schedule to phase in groundwater monitoring for existing landfills. *Id.* at 33,367. Within two years of the effective date of the new regulations, 25% of existing landfills must be in compliance, within three years, 50%, within four years, 75%, within five years, 100%. *Id.* As of 1986, only 25-30% of landfills had groundwater monitoring systems. *Id.* at 33,365.

Generally, Mississippi already requires groundwater monitoring at new landfills. *Regulations, supra* note 2, § D.17, 18.

[61] *Proposed Criteria, supra* note 1, at 33,365. With a few exceptions, groundwater monitoring requirements may be suspended if the owner or operator can demonstrate that there is no risk that hazardous wastes will migrate from the landfill to the uppermost aquifer throughout the landfill's life and during its closure and post-closure periods. *Id.* at 33,367.

[62] At a minimum, monitoring wells must be located up gradient and down gradient of the landfill. Encircling the landfill with monitoring wells, however, allows more effective monitoring. *Lee & Sigman, supra* note 30, at 2.

[63] *Proposed Criteria, supra* note 1 at 33,369-33, 381; *EPA Summary, supra* note 1, at 7. The EPA has not yet set standards for several hundred contaminants. For these, the *Proposed Criteria* require states to establish maximum concentration levels. 19 Env't Rep. (BNA) 1211 (Oct. 21, 1988).

[64] *EPA Summary, supra* note 1, at 7.

quire the owner or operator of a MSWLF to establish a program to detect incoming hazardous wastes[65] and PCB[66] wastes to prevent their disposal at the facility. At a minimum, these procedures must include "random inspections of incoming loads, inspection of suspicious loads, record keeping of inspection results, training of personnel to recognize hazardous waste, and procedures for notifying the proper state authorities if a regulated hazardous waste is found at the facility."[67] It is estimated that small-quantity generators[68] dispose of five to sixteen percent of their hazardous wastes in MSWLFs.[69] The Proposed Criteria seek to prevent illegal dumping by requiring states to regulate public access to landfills.[70]

Landfill Closure

The closed landfill must be enclosed by an appropriate final cover. The Proposed Criteria do not specify the type or required thickness of the cover.[71] States are to determine material "suita-

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[65] The EPA lists "hazardous wastes" at 40 C.F.R. § 261, subpt. D (1989), pursuant to Resource Conservation and Recovery Act of 1976, § 3001 U.S.C. § 6921 (1982).

[66] The EPA has promulgated specific regulations for the disposal of PCB's or polychlorinated biphenyls under the Toxic Substances Control Act, 15 U.S.C. § 2601-2671 (1988). *See* 40 C.F.R. § 761 (1990) (regulating disposal of PCBs). PCBs commonly serve as coolants, lubricants and/or sealants in electrical transformers and other equipment. *Id.* § 761.30.

[67] *Proposed Criteria, supra* note 1 at 33,335.

[68] "Small-quantity generators" are defined as generators which produce no more than 100kg./mo. of hazardous waste. 40 C.F.R. § 261.5. Small quantity generators are conditionally exempt from Resource Conservation and Recovery Act of 1976's subtitle C hazardous waste management regulatory program. 40 C.F.R. § 261.5(a) (1987). Small quantity generators must dispose of their wastes on-site, at an EPA authorized state or federally permitted TSD (treatment, storage, and disposal) facility, or at a state-licensed municipal or industrial solid waste facility. 40 C.F.R. §§ 261.5(f)(3), 261.5(g)(3).

[69] *Proposed Criteria, supra* note 1, at 33,318.

[70] *Id.* at 33,338. Mississippi's existing site access regulations are vague in comparison to the Proposed Criteria. The Mississippi regulations state that "[a]dequate security to control access into the facility and to prevent the disposal of unauthorized materials shall be provided. For landfills routinely used by the general public, an attendant shall be on duty during operating hours and during special site utilization to direct unloading of solid waste." *Regulations, supra* note 2, § D.8.

[71] *Proposed Criteria, supra* note 1, at 33,336. However, the EPA recommends a six inch cover of compacted earthen material. *Id.* One of the cover's purposes is to prevent seepage of rainwater or other liquids into the enclosed landfill. *Id.* Clay may exist around the landfill which would form a suitable cover, otherwise, a synthetic cover is needed.

ble" for a final cover and its minimum thickness.[72] Mississippi requires a final cover of at least two feet of earth[73] and specified minimal sloping on the top and sides of the landfill.[74] Grass should be planted on top of the cover to prevent erosion and further reduce moisture seepage into the landfill.[75]

The Proposed Criteria would require the owner or operator to submit a written closure plan to the state for approval[76] by the latter of the effective date of the regulations or the initial receipt of solid waste at the landfill.[77] Post-closure care would be conducted for thirty years. Post-closure care would include cover maintenance,[78] maintenance and operation of the leachate collection system, groundwater monitoring, and methane monitoring systems.[79] A second phase of post-closure maintenance, the duration of which would be determined by the State, would extend groundwater and gas monitoring beyond the thirty-year period.[80]

Sigman & Vinson, *supra* note 10, at 8.

[72] *Proposed Criteria, supra* note 1, at 33,336.

[73] NONHAZARDOUS WASTE MANAGEMENT REGULATIONS, *supra*, note 2, § D.19(a).

[74] *Id.* § D.19(b)(c).

[75] Sigman & Vinson, *supra*, note 10, at 8. State regulations mandate that the top six inches of the final cover consist of topsoil that will sustain vegetation. *Regulations, supra*, note 2, at § D.19(1).

[78] *Proposed Criteria, supra*, note 1, at 33,342. Mississippi requires that the Mississippi Bureau of Pollution Control be notified before the site is closed. *Regulations, supra*, note 2, § D.20(a).

[77] *Proposed Criteria, supra* note 1, at 33,343.

The closure plan, at a minimum, must include:

(1) A description of procedures to be used to close each unit of the landfill.

(2) An estimate of the maximum portion of the landfill that will be open at one time.

(3) An estimate of the maximum inventory of wastes ever on-site over the active life of the landfill.

(4) A description of the final cover.

(5) A schedule for completing all closure activities.

Id. at 33,342.

[78] Cover maintenance includes steps to prevent erosion and surface water run-off.

[79] *Proposed Criteria, supra* note 1, at 33,408-09.

[80] *Id.* at 33,345.

Local Governmental Authority to Acquire, Improve, Operate & Finance a Landfill

In Mississippi, solid waste disposal is essentially a function of local government. The stricter landfill regulations will cause many counties and cities to consider privatizing landfill operations. Before a county or city delegates solid waste disposal to a private company, the local government should first consider whether it can afford landfill improvements or construction by itself or in cooperation with other governmental units. Privatization does not eliminate the county's or city's exposure for liability arising from landfill leakage or regulatory noncompliance.[81]

Mississippi's Solid Waste Disposal Law of 1974[82] establishes the state's regulatory authority over the management and disposition of solid waste.[83] Garbage and rubbish disposal facilities, including sanitary landfills, must be approved by the Mississippi Department of Environmental Quality.[84] Disposal operations lacking state approval expose the owner/operator of the facility to civil liability. Penalties for violating the Act can reach $25,000.00 per violation.[85]

Whatever their ultimate form, the Proposed Criteria likely will greatly increase costs for landfill construction, maintenance, monitoring and closure. Accordingly, governmental units that traditionally could afford to maintain their own solid waste management programs will share costs and responsibilities in re-

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[81] For example, under the Comprehensive Environmental Response Compensation, and Liability Act of 1980 (CERCLA), "any person who by contract, agreement, or otherwise arrange[s] for disposal or treatment, or arrange[s] with a transporter for transport for disposal or treatment, of hazardous substances owned or possessed by such person, [or] by any other party or entity, ..." may be held liable for cleanup costs resulting from a release of this substance into the environment. 42 U.S.C. § 9607(a)(3), (4)(c). Sovereign immunity is not a defense under CERCLA; *see* Pennsylvania v. Union Gas Co., 109 S. Ct. 2273 (1989) (states held subject to suit 17 Federal Courts for violations of CERCLA).

[82] Miss. Code Ann. § 17-17-1 to -135 (Supp. 1989).

[83] The Solid Waste Disposal Law designates the Department of Natural Resources as the state agency regulating solid waste disposal. Miss. Code Ann. § 17-17-2 (Supp. 1989). Legislation in 1989 renamed the agency as the "Department of Environmental Quality." The structure of the department remains relatively unchanged.

[84] Miss. Code Ann. § 17-17-7 (Supp. 1989).

[85] *Id.* § 17-17-29. In addition, an unauthorized dump is a public nuisance per se. *Id.* § 17-17-17.

gional programs. The foresight of the 1974 Act is evidenced by its sanctioning of regional solid waste disposal systems. Ownership, operation and financing of systems may be shared by multiple counties and cities with the option of private company involvement.[86]

The Act establishes the state's regulatory authority over solid waste disposal, but designates local governments to establish and finance these facilities.[87] The specifics of how these projects may be financed, found elsewhere in the Mississippi Code, are summarized below.

Municipalities

A municipality may issue revenue bonds both to "acquire or improve"[88] a "garbage disposal system" or "rubbish disposal system."[89] Thus, a municipality may issue revenue bonds to acquire an existing private landfill and to upgrade it to satisfy the Proposed Criteria.[90]

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[88] *See Id.* § 17-17-33 (providing that counties, municipalities and private companies may participate in regional solid waste disposal systems). However, the Solid Waste Disposal Law makes it clear that a local governmental unit may construct and operate the landfill. *Id.* § 17-17-39.

The Act's requirement that solid and hazardous waste be handled in separate facilities precedes a similar requirement in the Proposed Criteria by over 15 years. Under § 17-17-15(1), hazardous waste may not be disposed of at the same or adjoining site as ordinary wastes unless specifically designated "exempted waste" by the Department of Environmental Quality. *Id.* § 17-17-5(1). Generally, hazardous waste must be disposed of in special incinerators, separate landfills, or other segregated facilities. *Id.*

[87] A board of supervisors or municipal governing body may "make available" collection and disposal facilities for solid wastes. Collection and disposal responsibilities may be contracted out to private companies. *Id.* § 17-17-5.

[88] Financing to "acquire or improve" encompasses the municipality's upgrading of a current facility, purchase of an existing facility, or construction of a new facility. *See Id.* § 21-27-11(c) (defining "improvement" as the "repair, betterment, enlargement, extension and other improvements to a system"); § 21-27-11(d) (specifying that to "acquire" means to "construct, purchase, gift, exercise or power of eminent domain and other methods by which a municipality may acquire a system"). The municipality is expressly empowered to acquire real and personal property for this purpose. Eminent domain may be exercised pursuant to § 11-27-1-51. *Id.* § 21-27-23(f).

[89] *Id.* § 21-27-23 (a). The bonds are to be issued in accordance with the procedure set out in Miss. Code Ann. § 21-27-41 to -69. *Id.* § 21-27-23(a).

The underlying assumption here is that a landfill is a "garbage disposal system" or "rubbish disposal system." Neither term is statutorily defined in Chapter 27.

[90] However, in most cases it may be impossible to upgrade an existing facility to

Revenue bonds must be retired through revenues generated by the project. For example, users fees or "tipping fees," commonly charged to users of the landfill, would have to be sufficiently high to retire the bonds and such revenue would have to be dedicated to this purpose. It has been a common practice in Mississippi for landfill operators to admit loads without fee assessment. Such a practice would likely become cost-prohibitive under the Proposed Criteria.[91] The municipality may want to contract with other municipalities, counties or private waste collectors to accept waste for a specified tipping fee to be placed in a sinking fund.[92]

COUNTIES

A county may also "[e]stablish, operate and maintain a rubbish disposal system . . . ."[93] Alternatively, the county may choose to contract with a private company or municipality to handle its wastes. Specifically, county boards of supervisors are empowered to contract with private persons or entities "[f]or the establishment, operation and maintenance of a rubbish or garbage disposal system . . . ."[94] The county may contract with a municipality to "[u]se jointly with such municipality any municipal dump or garbage or rubbish disposal system."[95] Likewise, the county, as owner and operator of its own system, may contract with municipalities to let them use the county site.[96]

If a county decides to establish and operate its own landfill, the board of supervisors may levy an ad valorem tax of up to

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meet the new standards.

[91] A municipality is not estopped from charging a tipping fee even though the service was previously complementary. *See Id.* § 21-27-23(e) (providing that "[t]he rates so fixed for services rendered by any system or combination thereof may be charged for all services rendered thereby, regardless of whether or not such services may have been previously rendered without rates of charges therefore by the previously existing . . . garbage disposal system [or] rubbish disposal system . . .").

[92] Section 21-27-23(e) authorizes the municipality to set and collect rates for services provided by the system. *Id.* § 21-27-23(e).

[93] *Id.* § 19-5-17. "Garbage" is encompassed by the word "rubbish." *Id.*

[94] *Id.*

[95] *Id.*

[96] *Id.* § 19-5-19 (1972).

four mills within the area served by the landfill.[97] Funds may be borrowed by the board in anticipation of the tax levy.[98] Counties, like municipalities, may set and collect garbage collection fees and tipping fees.[99] Counties may finance disposal system costs by issuance of general obligation bonds.[100]

IV. Alternatives for Regional Cooperation
Garbage Disposal Districts

The "garbage disposal district" will be of limited utility as Mississippi enters the new era of regionalized landfills. Counties may not create a garbage disposal district that include incorporated areas under Mississippi statute.[101] This Act limits a district to: "[a]ny contiguous area situated within any county of the state, and not being situated within the corporate boundaries of any existing municipality, and having no adequate . . . garbage and waste collection and disposal system, . . . may become incorporated . . . as a garbage and waste collection and disposal district . . . ."[102] The district may include property within neighboring counties if the adjoining county's land constitutes at least twenty percent of the total district.[103] A district may be incorporated[104] upon petition by resident land owners or resolution of the board of supervisors.[105] In either case, a public hear-

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[97] The area served by the county landfill is statutorily labeled a "garbage and rubbish disposal district." *Id.* § 19-5-21. The district may include area within municipal limits as long as that area is not served by the municipality's garbage disposal system. *Id.*

[98] *Id.*

[99] *Id.*

[100] *See Id.* § 19-19-1 (granting county board of supervisors authority to issue general obligation bonds to establish "rubbish and garbage disposal systems").

[101] *Id.* § 19-5-151.

[102] Id.

[103] *Id.* § 19-5-164. Land in an adjoining county not constituting at least 20% of the proposed district's land areas may be included in the district "if a certificate of convenience and necessity to do so is issued by the Mississippi Public Service Commission." *Id.*

[104] However, if either 20% or 150, whichever is lesser, of district voters protest the district's creation to the board of supervisors, the board must call an election on the question. *Id.* § 19-5-157. The district proposal must be approved by three-fifths of those voting. *Id.* § 19-5-159.

[105] *Id.* § 19-5-153. The petition must be joined by at least 25 resident property owners. However, a tract of land of 160 acres or more will not be included in the district

ing upon the question of the public convenience and necessity of the incorporation of the proposed district must follow.[106]

The district may charge fees for services it provides.[107] The district may issue general obligation bond,[108] and revenue bonds,[109] and may accept loans, grants, or other assistance from state and federal agencies.[110] The board of supervisors in a participating county may levy up to a four-mill tax on real property within the district[111] and may also exercise the power of eminent domain on behalf of the district.[112]

The district need not be the owner/operator of the system. The district may "[c]ontract with any municipality, person, firm or corporation for such services and for a supply and distribution of water, for collection, transportation, treatment and/or disposal of sewage and for services required incident to the operation and maintenance of such systems."[113]

A district, once formed, may take on other responsibilities such as the operation of a water supply system, sewer system and/or fire protection system.[114]

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unless consent is obtained from that property owner. *Id.*

[106] *Id.* § 19-5-155.

[107] *Id.* § 19-5-177(e). The assessment and collection of "reasonable rates, fees, tolls or charges for the services" of the system is statutorily required if the district has issued bonds. *Id.* § 19-5-195. The discretion of the district in setting the rates is not unlimited. The fees collected must meet certain minimum financial requirements:

> The rates, fees, tolls or charges prescribed shall be, as nearly as possible, such as will always produce revenue at least sufficient to (a) provide for all expenses of operation and maintenance of the system or systems, including reserves therefore, (b) pay when due all bonds and interest thereon for the payment of which such revenues are or shall have been pledged, charged or otherwise encumbered, including reserves therefore, extensions and improvements of service.

Id.

[108] *Id.* § 19-5-177(d).

[109] *Id.* § 19-5-181(1).

[110] *Id.* § 19-5-177(i).

[111] *Id.* § 19-5-189(1)(a). The tax levy is subject to majority approval of those voting within the district. *Id.* § 19-5-189(2)(c).

[112] *Id.* § 19-5-179.

[113] *Id.* § 19-5-175.

[114] *Id.*

The Interlocal Cooperation Act of 1974

Mississippi's Interlocal Cooperation Act of 1974[115] is designed to permit local governmental units to provide jointly services and facilities in a way that "will accord best with geographic, economic, population and other factors influencing the needs and development of local communities."[116] Generally, the Act allows local governmental units to do jointly what they are empowered to do individually.[117] That is, the units may contract to perform cooperatively[118] any function that each contracting party could individually perform.

The cooperative agreement must be reviewed by the Attorney General to determine its compatibility with Mississippi law.[119] The Attorney General's office, pursuant to Section 17-13-9(c), requires that each agreement specify the statutory authority which enables each party to perform the provisions of the agreement.

The Interlocal Cooperation Act provides counties and cities broad flexibility in sharing various costs and governmental responsibilities. For example, the Attorney General approved an agreement between the City of Vicksburg and Warren County whereby the county agreed to maintain and staff a sanitary landfill leased jointly by the city and county. In return, the city agreed to reduce the county's payments to the city for fire protection.[120]

Instead of delegating landfill operations to one governmental unit or the other, the city and county may agree to share duties.[121] For example, in one case, the Attorney General determined that the Interlocal Cooperation Act of 1974 permitted the

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[115] *Id.* § 17-13-1- to -17.

[116] *Id.* § 17-13-3.

[117] *Id.* § 17-13-7(1), (5). *See e.g.*, Op. Att'y Gen. (Apr. 9, 1986) ("In order for governmental units to enter into an Interlocal Agreement, each party to the agreement must have the power to do individually what the parties propose to do jointly").

[118] Miss. Code Ann. § 17-13-7(4) (Supp. 1989).

[119] *Id.* § 17-13-11(1).

[120] The Board was empowered to "acquire, construct, *finance*, develop, own, operate and maintain, solid waste collection and disposal facilities." *Id.* (emphasis added). The facilities would benefit governmental units within Harrison County. *Id.*

[121] Op. Att'y Gen. (Oct. 9, 1981).

joint operation of a sanitary landfill by the City of Magee and Simpson County as long as the two governmental units entered into a written agreement meeting the requirements of the Act.[122]

One drawback of the Act is that it does not empower the agreeing units to levy jointly taxes or incur debt.[123] Financing must be provided by the participating governmental units.[124] However, the facility need not be located within the boundaries of the local governmental unit in order for the unit to incur indebtedness to finance the facility.[125]

1981 Legislation to Promote Projects for Treatment of Solid and Hazardous Wastes

The express purpose of this legislation is to "promot[e] the construction and installation of projects for the collection, treatment, processing, reprocessing, generation, distribution, recycling, elimination, or disposal of solid and hazardous waste products" in Mississippi.[126] To accomplish that purpose, counties and cities[127] are authorized to enter into purchase/leaseback agreements with private waste disposal and treatment compa-

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[122] Op. Att'y Gen. (Oct. 9, 1981).

[123] Miss. Code Ann. § 17-13-17 (Supp. 1989).

[124] Miss. Code Ann. § 17-13-13 (Supp. 1989) This statute expressly authored participating units to incur bonded or floating indebtedness. *Id.* In another opinion, the Attorney General approved an agreement whereby Yalobusha County would levy a one-mill tax on all taxable property within the city limits of Coffeeville and within the participating district. Op. Att'y Gen. (Dec. 10, 1985). The tax would be used to finance a site for the disposal of garbage and rubbish collected within the district and to be disposed of outside the city limits but within the district. *Id.* The plan was approved on the condition that a garbage and rubbish disposal district be created pursuant to Miss. Code Ann. § 19-5-19 (1972). Op. Att'y Ms. Gen. (Dec. 10, 1985).

[125] Miss. Code Ann. § 17-13-13 (Supp. 1989).

[126] *Id.* § 17-17-101. The Act is clearly aimed at a broad spectrum of facilities including recycling plants and waste-to-energy conversion plants. However, the language is broad enough to include landfills. *See Id.* § 17-17-103(d) (defining "project" as "any real, personal or mixed property of any and every kind that can be used or that will be useful in controlling, collecting, storing . . . disposing of . . . and otherwise concerning solid or hazardous waste . . . .") The legislation's authors may have envisioned its application principally to sophisticated facilities. The Proposed Criteria certainly elevate the Mississippi landfill from its lowly status as a mere dump to a technologically advanced mechanism.

[127] *Id.* § 17-17-103(c). The legislation uses the word "municipalities" to refer collectively to counties and cities. *Id.*; *see* § 17-17-103(c) (defining "municipality").

nies.[128] The aim of the legislation is to induce companies to construct such facilities by enabling counties and cities to contract to "acquire, own and lease" that project.[129] The arrangement may be designed as a lease/sale or straight sale of the facility.[130]

The Legislature's intention for cities and counties to negotiate collectively these purchase/leaseback arrangements is apparent. The legislation authorizes "*municipalities*" to "acquire, own and lease" the project.[131] A "municipality" is defined by the Act as being "*one or more* counties or incorporated municipalities of this state or any combination thereof, *acting jointly or severally.*"[132]

Revenue bonds may be issued to finance the municipality's acquisition, purchase, construction, operation, maintenance or replacement of a facility.[133] The municipality's agreement with a private party to lease and/or purchase the facility must provide for the private party's retirement of the bonds.[134]

V. Recent Developments Enhancing Regional Cooperation The Mississippi Development Bank Act (1986)

In 1986, the Mississippi Legislature passed the Mississippi Development Bank Act[135] creating the Mississippi Development

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[128] *Id.* § 17-17-105(e).

[129] *Id.* § 17-17-101.

[130] *Id.* § 17-17-105(e). A governmental unit is permitted "[t]o enter into a lease/sale with an industry for the lease and/or sale of a project to such industry." *See also* § 17-17-127 (explaining that "[a]ny agreement made under subsection (e) of section 17-17-105 may provide that the project will be owned by the municipality, and leased to the industry [or] may provide the industry with an option to purchase the project . . .").

[131] *Id.* § 17-17-101 (emphasis added).

[132] *Id.* § 17-17-103(c) (emphasis added).

[133] *Id.* § 17-17-105(a)(c). Bonds may also be issued to "enlarge, expand and improve an existing project." *Id.* § 17-17-105(b)(c); *id.* § 17-17-107 (outlining procedures for issuance of revenue bonds).

[134] *Id.* § 17-17-105(f). This subsection provides that the agreement must require the contracting industry to

> pay to the municipality, or trustee, if any, for the bonds . . . such sums of money and at such periods as will equal the aggregate of principal, interest and redemption premium, if any, due on the bonds and also the costs, if any, to the municipality of operating, maintaining, insuring, repairing and replacing a project or portions thereof, including a reasonable amount for reserves.

Id.

[135] *Id.* § 31-25-1- to -27.

Bank (the Bank).[136] The Bank may issue bonds to finance projects such as the construction of landfills.[137] The Bank's bonds are secured by securities of the participating county or city.[138]

County Cooperative Service Districts (CCSD)

Senate Bill 2822, enacted in the 1989 legislative session,[139] permits boards of supervisors to join their counties into county cooperatives in the "financing, construction and administration of governmental services and facilities."[140] The CCSD is governed by a one to five member board of commissioners appointed by the board of supervisors of each participating county.[141]

With one exception, the CCSD may perform any act exercisable by an individual county. The CCSD has no taxing authority.[142] Some commentators see this as a serious drawback of Senate Bill 2822. However, the new law permits each participating county to levy a tax of up to one-half mill per year on all taxable property within the county.[143]

The new law had also been criticized for refusing to grant the CCSD authority to issue its own bonds. However, in the 1990 legislative session, this prohibition was removed. CCSDs are now empowered to issue revenue bonds.[144] The new law has

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[136] *Id.* § 31-25-7.

[137] *Id.* § 31-25-3. The Legislature intended for this Act to allow the financing of "infrastructure improvements and other public purposes." *Id.*

[138] *Id.* In effect, the Bank is loaning funds to the municipality or county.

[139] Act of Apr. 4, 1989, ch. 519, 1989 Miss. Laws 436 (codified as amended at Miss. Code Ann. §§ 19-3-101 to -115). The Act was amended during the 1990 legislative session.

[140] Miss. Code Ann. § 19-3-101(1) (Supp. 1990).

[141] *Id.* § 19-3-105(1). County supervisors and elected municipal officials may serve as commissioners. *Id.*

The term of each commissioner runs concurrent with the term of the appointing county. *Id.* That is, if commissioner A is appointed by X County's Board of Supervisors, commissioner A's term will expire simultaneously with that of the X County Board of Supervisors.

[142] *Id.* § 19-3-101(2).

[143] *Id.* § 19-3-113(1). The proceeds of the ½ mill levy are excluded from the 10% increase limitation of Miss. Code Ann. § 27-39-321. *Id.*

[144] *Id.* § 19-3-106.

also been criticized for refusing to grant the CCSD authority to issue its own bonds. Nevertheless, the board of supervisors of each participating county may issue general obligation bonds to finance the cooperative project.[145]

In addition to these taxation and debt financing mechanisms, the CCSD's project may be funded by federal, state or local grants to the CCSD.[146] Each participating county may impose special fees, tolls and assessments for services provided by the CCSD.[147] Likewise, the board of supervisors of each participating county and the governing authority of each municipality within the CCSD's territory may appropriate available funds to the CCSD.[148]

Municipalities within the geographical boundaries of the CCSD, upon approval of the CCSD's board of commissioners, may contract with the CCSD to receive service from the CCSD.[149] The contract must provide the CCSD with "sufficient payment to enable the district to meet its expenses, including any debt service as a result of any projects of the service district for which the contract is entered."[150]

VI. Conclusion

As landfills are subjected to heightened regulatory scrutiny, fewer municipalities and counties in Mississippi will be able to maintain their traditional solid waste disposal autonomy. Old turf battles will, by financial necessity, be resolved as neighboring governmental units organize their natural and fiscal resources into solid waste disposal districts. The regionalization alternatives discussed above should be evaluated to determine the most efficient means of making the transition to regionalization.

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[145] *Id.* § 19-3-103(g).

[146] *Id.* § 19-3-113(2). This section allows the CCSD to "defray the expenses of the district related to such projects or services." *Id.*

[147] *Id.* § 19-3-111.

[148] *Id.* § 19-3-115.

[149] *Id.*

[150] *Id.*

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COMMENT

IMPEACHING ONE'S OWN WITNESS WITH PRIOR INCONSISTENT STATEMENTS: A RECOMMENDED SOLUTION TO THE INHERENT PROBLEMS ASSOCIATED WITH RULE 607 OF THE MISSISSIPPI RULES OF EVIDENCE

Introduction

A familiar nightmare for the trial lawyer is the witness who changes his story on the witness stand.[1] Prior to the adoption of the Federal Rules of Evidence, a party vouched for the credibility of his own witness.[2] Thus the old "voucher rule" stated that if a calling party's witness testified differently at trial from that which he had previously stated outside the courtroom, the attorney had to show both surprise and damage to the case before he could impeach his own witness.[3] Since in many instances the attorney knew prior to trial that his witness would not testify as expected, the elements of surprise and

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[1] I would like to thank Mr. Robert A. Weems, Professor of Law at the University of Mississippi School of Law, without whose valuable advice and assistance this comment would not have been possible.

[2] Graham, Examination of a Party's Own Witness Under the Federal Rules of Evidence: A Promise Unfulfilled, 54 Tex. L. Rev. 917, 926 (1976). The Advisory Committee for the Federal Rules of Evidence specifically abandoned the voucher rule. Fed. R. Evid. 607 advisory committee's note.

[3] Graham, *supra* note 2, at 926; *see* United States v. Gregory, 472 F.2d 484, 488 (5th Cir. 1973) (could not impeach without showing of surprise); United States v. Scarbrough, 470 F.2d 166, 168 (9th Cir. 1972) (could only impeach if testimony was contrary to what was expected); Bushaw v. United States, 353 F.2d 477, 481 (9th Cir. 1965) (must show both surprise and damage before party can impeach his own witness).

damage were often difficult to prove.[4] Even if surprise and damage could be successfully shown, the voucher rule led to unpredictable and unreliable results.

Believing the voucher rule to be archaic and unsatisfactory, Congress approved Federal Rule of Evidence 607,[5] which Mississippi courts also adopted.[6] Rule 607 allows any party to attack the credibility of any witness. No longer is the calling party required to show surprise or damage to his case when the testimony at trial conflicts with a prior statement. However, this rule has proved troubling to both Mississippi and federal courts in that it has great potential for both abuse by attorneys and for misuse by the jury. First, it is probable that the jury will use a prior inconsistent statement not to assess credibility, but rather as substantive evidence of guilt. Secondly, the rule may tempt the proponent of the statement to use it as a convenient subterfuge to circumvent the hearsay rule in order to put inadmissible evidence before the jury. Conversely, because the prior inconsistent statement could be very damaging, the party opposing admission may seek to have it excluded on the basis of hearsay, when in fact the evidence may be offered for a non-hearsay purpose.

There are several possible solutions to the problem in Mississippi of wide-open impeachment by prior inconsistent statements. The current but ineffective solution is the use of the limiting instruction. Another solution is to re-instate the pre-Rule 607 practice of requiring surprise and damage before impeachment can be allowed. A third solution is to amend Rule 801(d)(1)(A) of the Mississippi Rules of Evidence[7] to allow all impeachment evidence in as substantive evidence. A final solution is to call for the amendment of Rule 607 so that impeach-

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[4] Graham, *supra* note 2, at 927. If the calling party knew prior to trial that his witness had recanted his testimony, it was obvious that no surprise could be shown. *Id.* Requiring surprise only prevented the calling party from eliciting the adverse testimony. *Id.* at 979 n.309. The witness' favorable testimony could still be used. *Id.* Damage, however, did not exist if the witness merely denied knowledge of facts or his testimony included "neutral" facts. *Id.* at 931.

[5] FED. R. EVID. 607 advisory committee's note. Rule 607 states: "The credibility of a witness may be attacked by any party, including the party calling the witness." FED. R. EVID. 607.

[6] The Mississippi Rule differs only slightly in its language: "The credibility of a witness may be attacked by any party, including the party calling *him*." MISS. R. EVID. 607 (emphasis added).

[7] Rule 801(d)(1)(A) as presently written limits non-hearsay to a statement "[i]nconsistent with his testimony, and was given under oath subject to the penalty of perjury at a trial, hearing or other proceeding, or in a deposition . . . ." MISS. R. EVID. 801(d)(1)(A).

ment evidence is subjected to the balancing test of weighing probative value against undue prejudice as found in Rule 403 of the Mississippi Rules of Evidence.[8]

This comment will address the current problems inherent in Rule 607 as presently drafted and will examine these solutions to the problem. In addition, this comment will recommend the court's adoption of an amendment to Rule 607 to include the balancing test of Rule 403.

I. How the Problem Evolved

The problem of abuse and misuse of prior inconsistent statements as impeachment evidence would have been eliminated had Congress adopted the Proposed Federal Rules of Evidence as submitted by the Advisory Committee and the United States Supreme Court. Abandoning the old voucher rule,[9] Rule 607 allowed the credibility of any witness to be attacked by any party. In conjunction with Rule 607, Proposed Rule 801(d)(1)(A) provided a scheme whereby all prior inconsistent statements by a witness who testified differently at trial were not hearsay.[10] Thus, under the Proposed Rules, courts admitted all such prior inconsistent statements as substantive evidence.[11]

However, Congress revised Rule 801(d)(1)(A) by limiting the prior inconsistent statements which would be admissible as substantive evidence. Presently only sworn statements taken at certain formal proceedings are deemed non-hearsay. Congress evidently believed that unsworn prior inconsistent statements lacked the reliability of those given under oath.[12] The only way these unsworn statements could be used as substantive evidence is if the statement falls under the "catch-

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[8] Rule 403 provides: "Although relevant, evidence may be excluded if its probative value is substantially outweighed by the danger of unfair prejudice, confusion of the issues, or misleading the jury, or by considerations of undue delay, waste of time, or needless presentation of cumulative evidence." Miss. R. Evid. 403. Although Rule 403 seemingly applies to *all* evidence offered during the course of a trial, this comment will illustrate that trial judges do not routinely subject impeachment evidence of prior inconsistent statements to the balancing test of Rule 403. The purpose of this Comment is to suggest the amendment of Rule 607 to require impeachment evidence to be subjected to the balancing test of Rule 403.

[9] "The traditional rule against impeaching one's own witness is abandoned as based on false premises. A party does not hold out his witnesses as worthy of belief, since he rarely has a free choice in selecting them." Fed. R. Evid. 607 advisory committee's note.

[10] Graham, *supra* note 2, at 961.

[11] *Id.*

[12] Ordover, *Surprise! That Damaging Turncoat Witness Is Still With Us: An Analysis of Federal Rules of Evidence 607, 801(d)(1)(A) and 403*, 5 Hofstra L. Rev. 65, 74 (1976).

all" exception to the hearsay rule, Rule 803(24) of the Federal Rules of Evidence.[13] Rule 607, meanwhile, was not revised to correspond with the changes made to Rule 801(d)(1)(A), so the Advisory Committee's efforts to comprehensively deal with the import of prior inconsistent statements were effectively nullified.[14] Thus, the only way unsworn prior inconsistent statements could be offered was through the impeachment process. A problem emerges, however, when the jury improperly considers impeachment evidence as substantive evidence.

II. Jury's Misuse of Impeachment Evidence

Both under the voucher rule and Rule 607, courts have attempted to alleviate the problem of improper use of impeachment evidence by employing the limiting instruction. Usually immediately following impeachment, the trial judge instructs the jury to use this evidence only in assessing the credibility of the witness. However, one court noted that by calling the jury's attention again to the statement, the instruction only serves to emphasize the impeachment testimony so that the jury may give it greater credence than to the sole issue of credibility.[15] One study indicated that instructions to disregard evidence for one purpose and use it for another actually had a "backfire" effect, and that such evidence was even more prejudicial with the instruction than without it.[16] It is suggested that judges, trained to weigh both the prejudicial effect and probative value of evidence, may overestimate the

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[13] Rule 803(24) allows the court to admit hearsay testimony not allowed under any other exception. The rule mainly requires that the statement in question have the "equivalent circumstantial guarantees of trustworthiness" as those offered by the other hearsay exceptions and that notice be given to the adverse party that this exception will be invoked. McCormick on Evidence § 324.1, at 908-09 (E. Cleary 3d ed. 1984).

[14] Graham, *Employing Inconsistent Statements for Impeachment and As Substantive Evidence: A Critical Review and Proposed Amendments of Federal Rules of Evidence 801(d)(1)(A), 613, and 607*, 75 Mich. L. Rev. 1565, 1613 (1977). The result was that there is no limitation on the party calling the witness to place a prior inconsistent statement in evidence. *Id.*

[15] Rowe v. Farmers Ins. Co., 699 S.W.2d 423, 426 (Mo. 1985).

[16] Tanford & Cox, *The Effects of Impeachment Evidence and Limiting Instructions on Individual and Group Decision Making*, 12 Law & Hum. Behav. 477, 479 (1988). The study showed that impeachment evidence harmed defendants in that there were more guilty verdicts with this evidence and that limiting instructions did not nullify this effect. *Id.* at 480. The study involved two groups of jurors. *Id.* One group deliberated individually and one group deliberated collectively. *Id.* at 480-81. In discussing how these two groups used the limiting instruction, these authors suggested that courts apply stricter guidelines in allowing impeachment evidence to be admitted in the first place. *Id.* at 496. They felt that this approach would be more practicable than asking a jury to do its own "limiting." *Id.*

jurors' ability to obey a limiting instruction.[17] Asking a juror to compartmentalize portions of testimony for only one purpose may be asking the impossible.[18]

A. Federal Courts' Treatment

In *Kruelwitch v. United States*,[19] Justice Jackson stated that the assumption that jury instructions could overcome the prejudicial effects of impeachment testimony was "naive" and resulted in an "unmitigated fiction."[20] Lower federal courts have also agreed with this assessment of the jury's inability to separate impeachment evidence from substantive evidence. The Fourth Circuit discussed the impeachment of one's own witness at length in *United States v. Morlang*.[21] The court stated in dicta that "despite proper instructions to the jury, it is often difficult for them to distinguish between impeachment and substantive evidence."[22] The court noted that this inability only led to confusion, and that the danger of convicting a defendant on the basis of this evidence was great.[23] The Fifth Circuit also expressed doubt in a jury's ability to use impeachment evidence of prior inconsistent statements properly in *United States v. Hogan*,[24] stating "[t]he jury will hear the impeachment evidence, which is not otherwise admissible and is not substantive proof of guilt, but is likely to be received as such proof."[25] Although other federal courts have followed the line of reasoning set forth in *Kruelwitch*, *Morlang*, and *Hogan*,[26] Rule 607 remains unamended both at the federal and the state level.

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[17] *Id.* at 495-96.

[18] M. DOMBROFF, DOMBROFF ON UNFAIR TACTICS 146 (1984). The aforementioned studies show that it is nearly impossible to separate evidence for different purposes in the jurors' minds.

[19] 336 U.S. 440 (1949).

[20] *Kruelwitch*, 336 U.S. at 453.

[21] 531 F.2d 183 (4th Cir. 1975).

[22] *Id.* at 190.

[23] *Id.*

[24] 763 F.2d 697 (5th Cir. 1985).

[25] *Hogan*, 763 F.2d at 702.

[26] *See* Shepard v. United States, 290 U.S. 96, 104 (1933) (considering evidence for one purpose and not another too subtle for ordinary mind); United States v. Duff, 332 F.2d 702, 707 (6th Cir. 1964) (jury could not help considering content of the statement as substantive evidence). *But see* United States v. Hogan, 763 F.2d 697, 702 (5th Cir. 1985) (jury confusion can be offset by limiting instruction); United States v. DeLillo, 620 F.2d 939, 947 (2d Cir. 1980) (prejudice minimal since court must assume jurors followed limiting instruction); United States v. Lemon, 497 F.2d 854, 858 (10th Cir. 1974) (presumption that juror will remain true to oath and follow instructions).

B. Mississippi Supreme Court Treatment

The Mississippi Supreme Court likewise seems to consider such limiting instructions to be a "fiction." In *Moffett v. State*,[27] an appeal from a conviction for capital murder, the State's main witness had made a damaging videotaped statement inculpating the defendant.[28] At trial, the witness, while admitting making the statement, completely denied its veracity.[29] The trial judge ruled that the prosecution had been surprised by this testimony and allowed the jury to hear the prior inconsistent statement.[30] The Mississippi Supreme Court held that the trial court erred not only in finding that the State was surprised by this testimony, but also in allowing the prior inconsistent statement to be used as substantive evidence by the jury.[31] Justice Robertson, writing for the majority, stated "[t]he average juror will have a difficult enough time without the statement sitting in his lap keeping distinct in his mind that which he has heard as evidence and what he has been told may be considered for impeachment only."[32] The court further noted that many deemed it "[f]olly to think juries can-or will even attempt to-keep this distinction in mind."[33]

Harrison v. State[34] voices virtually the same sentiment. Another appeal from a murder conviction, *Harrison* involved the State's impeachment of its own witness by prior inconsistent statements.[35] The trial judge did not instruct the jury to limit this evidence to the issue of the witness' credibility.[36] However, the Mississippi Supreme Court held this to be harmless error for several reasons. Not only was there other ample evidence to convict Harrison, but also ". . . [t]he jury's ability to obey such an instruction [was] questionable."[37] Other states

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[27] 456 So. 2d 714 (Miss. 1984).

[28] *Moffett*, 456 So. 2d at 716. Although *Moffett* was decided prior to the adoption of Rule 607 by Mississippi, it illustrates the long-held belief that the limiting instruction is a "fiction."

[29] *Id.* at 717-18.

[30] *Id.* at 717.

[31] *Id.* at 720-21.

[32] *Id.* at 720.

[33] *Id.* It appears, then, that the fact that jurors cannot separate impeachment evidence and substantive evidence is widely acknowledged.

[34] 534 So. 2d 175 (Miss. 1988).

[35] *Harrison*, 534 So. 2d at 177-78. A post-rule 607 case, *Harrison* finds the Mississippi court still dealing with the ineffectiveness of the limiting instruction.

[36] *Id.* at 179.

[37] *Id.* The court further noted that the prior inconsistent statements were harmless because they were disclosed in "open court" in the presence of the opposing party, and that the witness was available for cross-examination by defense counsel concerning in-

also find the efficacy of such a limiting instruction to be minimal.[38] Yet they and Mississippi continue to utilize the instruction to limit the use of prior inconsistent statements while acknowledging that the instruction does not really work.

III. Abuse of the Impeachment Process

Knowing that a jury cannot separate evidence used only to assess credibility from substantive evidence, lawyers are sometimes tempted to impeach by prior inconsistent statements solely so the jury can hear the statements.[39] Rule 607 as written allows this type of impeachment to occur time after time, resulting in time-consuming appeals and reversals of convictions.

In *United States v. Morlang*,[40] the Fourth Circuit dealt with the situation of the government calling a witness solely for the purpose of impeaching him. The defendant, Morlang, had been convicted in the district court of conspiracy to bribe a Federal Housing Administration director in connection with a housing project.[41] At trial, the government called its own witness, Wilmoth, knowing that Wilmoth would refuse to implicate Morlang.[42] On the witness stand, Wilmoth further denied having a conversation with a fellow inmate while in prison.[43] The government subsequently called the fellow inmate as a witness solely for the purpose of relating an out-of-court statement allegedly made to him by Wilmoth which would inculpate Morlang.[44]

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consistencies in his testimony. *Id.*

[38] *See* Gibbons v. State, 248 Ga. 858, 286 S.E.2d 717, 721 (1982) (instructions are unrealistic and confusing); State v. Dodge, 397 A.2d 588, 592 (Me. 1979) (jury would use impeachment evidence substantively); State v. Ortlepp, 363 N.W.2d 39, 43 (Minn. 1985) (risk of jury using impeachment evidence substantively even with proper instruction); Rowe v. Farmers Ins. Co., 699 S.W.2d 423, 426 (Mo. 1985) (instruction confuses jurors and highlights prior inconsistent statements).

[39] 3 D. Louisell & C. Mueller, Federal Evidence § 299, at 195 (1979). Courts should view impeachment attempts as highly suspect where, ". . . (i) the testimony of the witness has conveyed no data of significance in the case, but (ii) the prior statement does assert important data and (iii) the statement would violate the hearsay rule if received for its truth." *Id.*

[40] United States v. Morlang, 531 F.2d 183 (4th Cir. 1975).

[41] *Morlang*, 531 F.2d at 185.

[42] *Id.* at 188. In addition, Wilmoth had never implicated Morlang in the bribery scheme. *Id.* at 189 n.12.

[43] *Id.* at 188.

[44] *Id.* The out-of-court statement the government wanted the jury to hear was that Wilmoth allegedly told the inmate, " 'One of us had to take the rap so the other one could stay out and take care of the business.' " *Id.* at n.11. This statement did not relate to the issue of conspiracy to bribe an official. *Id.* Its only purpose was so that the jury

The Fourth Circuit reversed the conviction and remanded for a new trial.[45] The court recognized that impeachment was proper where it is "[n]ecessary to alleviate the harshness of subjecting a party to the mercy of a witness who is recalcitrant or who may have been unscrupulously tampered with."[46] However, in *Morlang*, the government's only possible purpose in calling the adverse witness Wilmoth was to get the damaging out-of-court statement before the jury.[47] The Fourth Circuit found such a presentation of testimony "by indirection" impermissible.[48] Referring to Rule 607, the court stated: "Despite the fact that impeachment of one's own witness may be permitted, this does not go so far as to permit the use of the rule as a subterfuge to get to the jury evidence otherwise inadmissible."[49] This much-quoted language and its underlying principle has been restated in subsequent decisions by other circuit courts of appeal.[50]

The Mississippi Supreme Court likewise has upheld the principle that impeachment cannot be used as a "mere subterfuge" for introducing a prior inconsistent statement that the jury will be apt to consider substantively. Recently, the Mississippi Supreme Court reversed the defendant's conviction for burglary in *Brown v. State*[51] because the evidence used to convict Brown consisted primarily of impeachment evidence of prior inconsistent statements made by two witnesses.[52] The

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could infer Morlang's guilt. *Id.*

[45] *Id.* at 192.

[46] *Id.* at 190. The court added that although impeachment may aid the quest for truth, that quest must be balanced against basic notions of fairness. *Id.* Furthermore, the judicial system is based upon the principle that a man should not be convicted on the basis of hearsay evidence. *Id.*

[47] *Id.* The court stated that allowing this inmate to voice a "naked conclusion as to Morlang's guilt" under the guise of impeachment would be tantamount to allowing hearsay in as evidence. *Id.*

[48] *Id.* at 189.

[49] *Id.* at 190.

[50] *See, e.g.*, United States v. Livingston, 816 F.2d 184, 192, n.4. (5th Cir. 1987) (primary purpose cannot be to place incriminating hearsay into evidence); United States v. Johnson, 802 F.2d 1459, 1466 (D.C. Cir. 1986) (sole purpose cannot be introduction of evidence not independently admissible); United States v. Sebetich, 776 F.2d 412, 429 (3d Cir. 1985) (cannot call witness to circumvent hearsay rule); United States v. DeLillo, 620 F.2d 939, 946 (2d Cir. 1980) (impeachment cannot be mere subterfuge); Whitehurst v. Wright, 592 F.2d 834, 839 (5th Cir. 1979) (same).

[51] 556 So. 2d 338 (Miss. 1990).

[52] *Brown*, 556 So. 2d at 339. Brown was convicted of the burglary of a pharmacy at Houlka, Mississippi, and sentenced to a prison term of seven years. *Id.* The State put two written prior inconsistent statements, made to police investigating the burglary and signed by the witnesses, into evidence. *Id.* at 340. These statements said that Brown admitted to committing the burglary. *Id.* These witnesses testified to the contrary at

court found that prior inconsistent statements could only properly be used to assess the witnesses' credibility,[53] but concluded in *Brown* that the jury used them as substantive evidence of guilt.[54] The court's holding in *Brown* follows a similar line of reasoning in earlier decisions.[55]

The judiciary is not alone in viewing this type of trial tactic as impermissible. The Code of Trial Conduct for the American College of Trial Lawyers states: "A lawyer should not attempt to get before the jury evidence which is improper."[56] If he or she knows his adversary will try to get in such evidence through the "back-door" of impeachment by prior inconsistent statements, an attorney can only hope to have a pre-trial motion in limine granted to exclude these statements.[57] An objection after the damaging evidence has been heard has little effect.[58]

IV. Suggested Solutions to the Problem

Several solutions are possible to prevent potential misuse of impeachment by prior inconsistent statements. The four solutions presented here are by no means an exclusive group. However, these four represent the most notable solutions offered by primary and secondary authorities on the subject of impeachment. Each solution will be analyzed and its merits weighed against its drawbacks.

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trial and denied the contents of the written statements. *Id.*

[53] *Id.* at 340. The Mississippi Supreme Court found that even though there had been no limiting instruction from the trial judge, Brown's conviction still required reversal, since there was no other substantive evidence against him. *Id.*

[54] *Id.* The court stated that the jury must have used the impeachment evidence improperly because no other evidence was even offered by the State. *Id.*

[55] *See* Harrison v. State, 534 So. 2d 175, 178 (Miss. 1988) (impeachment may not be used as device to avoid hearsay rule); Moffett v. State, 456 So. 2d 714, 720 (Miss. 1984) (impeachment evidence cannot be used substantively to decide guilt); Davis v. State, 431 So. 2d 468, 473 (Miss. 1983) ("frown" on use of hearsay evidence that goes to ultimate issue of guilt).

[56] Corboy, *Cross-examination: Walking the Line Between Proper Prejudice and Unethical Conduct*, 10 Am. J. Trial Advoc. 1, 6 (1986) (quoting Code of Trial Conduct for the American College of Trial Lawyers Rule 19(g)).

[57] *Id.* at 13. Corboy noted that when evidence is considered "*legally* unfair," the lawyer steps over an "invisible line" into unethical trial tactics. *Id.* at 5 (emphasis in original).

[58] *Id.* at 12. Corboy also agreed that the instruction to the jury after a sustained objection has little value. *Id.* He further noted that it was unreasonable to expect juries to understand that they cannot utilize all the evidence presented at trial. *Id.*

A. *Maintaining the Status Quo—The Limiting Instruction*

The method currently employed by the courts to avoid the problems associated with abuse and misuse of impeachment evidence is the limiting instruction. The use of the limiting instruction has been demonstrated to be of little or questionable effect in alleviating misuse of Rule 607 by juries.[59] As previously shown, the limiting instruction to the jury is virtually meaningless.[60] Furthermore, the purpose of the limiting instruction is to prevent *jury* misuse of impeachment evidence. Courts never intended the instruction to prevent *attorney* abuse of Rule 607; nor indeed does it serve any purposeful deterrent in that aspect. Since most judges and lawyers acknowledge that the limiting instruction offers no workable solution it seems futile to persist with its use. The need for change is clearly indicated.

B. *Return to the Voucher Rule*

As discussed earlier, the dual requirements of surprise and damage do serve to keep in check the temptation to offer a witness' prior inconsistent statement solely so the jury may hear its content.[61] Furthermore, Congress' concerns over the reliability of unsworn testimony could be somewhat ameliorated because showing both surprise and damage does help to limit impeachment to its legitimate use.[62] In addition, these requirements appear beneficial to the attorney who wants to exclude damaging evidence.[63] On the other hand, counsel in many cases must feign surprise in order to bring in evidence which is other-

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[59] *See supra* note 15 and accompanying text.

[60] *See supra* notes 26, 28, 35 and accompanying text.

[61] *See supra* notes 2-4 and accompanying text.

[62] Graham, *supra* note 2, at 979. A return to the requirement of surprise and damage would obviously necessitate an amendment to Rule 607. Graham suggests amending Rule 607 thusly:

> The credibility of a witness may be attacked by any party, except that the credibility of a witness may be attacked by the party calling the witness by means of a prior inconsistent statement only upon a showing of surprise and affirmative damage. The foregoing exception does not apply to impeachment by means of a prior inconsistent statement admitted pursuant to Rule 801(d)(1)(A), 801(d)(2), or 803.

Graham, *supra* note 14, at 1617.

[63] Graham, *The Relationship Among Federal Rules of Evidence 607, 801(d)(1)(A), and 403: A Reply to* Weinsten's Evidence, 55 TEX. L. REV. 573, 582 (1977). For instance, if an attorney knows a witness has changed his testimony, and his adversary knows this as well, the element of surprise is absent. *Id.* at n.38. The attorney can be assured the damaging testimony will not come in. *Id.*

wise inadmissible.[64] The court must then shift focus to determine if actual surprise and damage exist, further muddying the waters for both the jury and the court.

C. *Amend Rule 801(d)(1)(A)*

Since Proposed Rule 801(d)(1)(A) provided that prior inconsistent statements of a witness were not hearsay, this rule complemented Rule 607.[65] If prior inconsistent statements were admissible as substantive evidence, no question would arise as to how the jury could use the evidence and no limiting instruction would be necessary. Expansion of Rule 801(d)(1)(A) to allow more prior statements in as non-hearsay, however, would involve an examination of the dangers Congress originally feared when it revised Rule 801(d)(1)(A).[66]

Congressional fears that unsworn prior statements were unreliable precipitated amending Rule 801(d)(1)(A) so that only sworn prior testimony was non-hearsay. However, these concerns about the unreliability of prior unsworn statements seem unfounded when one considers the rationale behind the rule against hearsay. A statement is not considered hearsay if three conditions are met: the witness must take an oath, he must be personally present at the trial, and he must be available for cross-examination.[67] Congress seemed to place great credence in the fact that the testimony was taken under oath at a formal proceeding,[68] but this restriction in the name of reliability is questionable.[69]

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[64] *See supra* notes 2-4 and accompanying text.

[65] Graham, *supra* note 2, at 961.

[66] *Id.* at 971; *see also supra* notes 12-13 and accompanying text.

[67] McCormick on Evidence, *supra* note 13, § 245, at 726-27. McCormick states that the oath was deemed important both because of its religious and ceremonial implications, and because of the inherent danger of prosecution for perjury. *Id.* at 727. Personal presence of the witness at trial assured the jury of being able to observe the demeanor of the witness. *Id.* Finally, lack of opportunity to cross-examine is considered the main reason for the rule against hearsay. *Id.* at 728. All three of these conditions must be present before a statement is considered non-hearsay. *Id.* at 727. McCormick felt that classifying prior inconsistent statements as non-hearsay would improve the existing use of such statements. *Id.* § 50, at 121.

[68] Graham, *supra* note 2, at 968. Congress defined a formal proceeding as a "trial, hearing, or other proceeding, or a deposition" in which the witness was subject to penalty of perjury. *Id.* Congress felt the formality of the prior proceeding assured the statement's reliability. *Id.*

[69] *Id.* These restrictions do not offer any more reliability than, for example, an affidavit or a signed statement that the witness acknowledges making. *Id.* Graham even suggests that an oral statement not made under oath which the witness acknowledges during trial may be as reliable as any "formal" statement. *Id.* The focus should properly be on the truthfulness of the statement, not the formality of proceedings under which it

Other problems with reliability, such as lapse of memory,[70] can be effectively safeguarded through cross-examination since the witness is present at trial.[71] The best tool to determine the reliability of the statement is cross-examination, not whether or not the prior statement was made under oath.

Currently, there are several alternative proposals in support of the amendment of Rule 801(d)(1)(A).[72] Any one of these proposed amendments would allow many more prior inconsistent statements to be admitted substantively into evidence. However, this solution and the others previously discussed have one common feature: they all focus on

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was made. *Id.*

[70] Studies have shown that people vary in the ability to recall what they have observed, and that recall is affected by circumstances and the retelling of the event. J. MARSHALL, LAW AND PSYCHOLOGY IN CONFLICT 28-29 (2d ed. 1980). However, Congress left no avenue open to consider what could be an honest lapse of memory. *Id.* The statement of the witness is often taken shortly after an event occurs. *Id.* The statement can be colored by the emotional impact of the event. *Id.* at 30. Numerous stresses leading up to the witness' appearance at trial to testify also affect the memory. *Id.* at 29.

[71] If the testimony given at trial is inconsistent with the earlier statement, counsel will often try to impeach the witness. However, it has been shown that interrogation itself produced much more complete recall. *Id.* at 109. Witnesses who wished to change the earlier statement were found to be more accurate than others. *Id.* Cross-examination seemed to make the witness reconsider or reevaluate the original statement. *Id.* This finding supported the belief of a psychiatrist who thought "[c]omplete consistency in testimony is likely to be a sign of perjury." *Id.* (citing Kubie, *Implications for Legal Procedure of the Fallibility of Human Memory*, 108 U. PA. L. REV. 59, 67 (1959)).

Thus, Congress' concerns over a sworn statement at a formal proceeding seem ill-founded. As Judge Learned Hand so aptly stated:

> The possibility that the jury may accept as the truth the earlier statements in preference to those made upon the stand is indeed real, but we find no difficulty in it. If, from all that the jury see of the witness, they conclude that what he says now is not the truth, but what he said before, they are none the less deciding from what they see and hear of that person and in court. There is no mythical necessity that the case must be decided only in accordance with the truth of words uttered under oath in court.

DiCarlo v. United States, 6 F.2d 364, 368 (2d Cir. 1925).

[72] Graham, *supra* note 2, at 968-69. McCormick proposed admitting the prior statement if (1) the witness had personal knowledge of the facts of the statement, (2) the witness was available for cross-examination by the party against whom the statement is offered, and (3) the statement was either written or signed by the witness, *or* given in a judicial or official hearing, *or* acknowledged by the witness at trial as his own statement. *Id.* at 969 (emphasis added) (citing McCormick, *The Turncoat Witness: previous Statements as Substantive Evidence*, 25 TEX. L. REV. 573, 588 (1947)). Another proposal favored admitting prior statements if all of the aforementioned conditions were present, except the option of a statement given in a judicial or official hearing. *Id.* These proposals assure that the statement was in fact made and that cross-examination can test the statement's reliability. *Id.*

the motives of the attorney who is trying to either exclude or get in certain testimony. Even if the restrictions on Rule 801(d)(1)(A) were lifted, a better solution to the inherent problems associated with Rule 607 is available.

D. The Best Solution—Amend Rule 607

Rather than looking at the problem from the point of view of the attorney's *motive* in offering evidence, courts should instead look to the *effect* of the evidence offered.[73] The probative value of the evidence as to credibility can be evaluated from several different perspectives. If the prior inconsistent statement contains facts of minor significance to the case, its probative value as far as impeachment is probably high. If, however, the prior statement asserts facts material to the issue of the case, the trial judge should use Rule 403 to weigh the possible unfair prejudice that could result from the statement being admitted into evidence. Unfair prejudice is defined as suggesting a decision on an improper basis.[74] The Advisory Committee's note to Rule 403 also states that in deciding whether to exclude evidence, ". . . consideration should be given to the probable effectiveness or lack of effectiveness of a limiting instruction."[75] Thus, relevant evidence could be excluded from substantive consideration by the jury if its prejudicial value substantially outweighs its probative value as to credibility. Some courts have already employed the balancing process to the admissibility of hearsay evidence.[76]

In *Cooper v. State Farm Fire & Casualty Co.*,[77] the Mississippi Supreme Court recently held it was reversible error for the trial court to allow testimony under the guise of impeachment to avoid the hear-

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[73] This idea is espoused by one of the leading authorities in the field of evidence:

> Instead of placing so much emphasis on the motive of the profferor, an approach more consistent with the underlying policy of the [F]ederal [R]ules of [E]vidence would be to analyse the problem in terms of Rule 403—is the probative value of the impeaching evidence outweighed by its prejudicial impact?

3 WEINSTEIN'S EVIDENCE, § 607(01), at 607-20 (1988).

[74] FED. R. EVID. 403 advisory committee's note.

[75] *Id.*

[76] *See* United States v. Hogan, 763 F.2d 697, 702 (5th Cir. 1985) (risk of conviction on basis of hearsay should be considered under Rule 403); State v. Dodge, 397 A.2d 588, 592 (Me. 1979) (must weigh probative value for impeachment against unfair prejudice to defendant); State v. Ortlepp, 363 N.W.2d 39, 43 (Minn. 1985) (same); State v. Dexter, 269 N.W.2d 721, 722 (Minn. 1978) (Rule 403 approach preferable to reliance on surprise and damage); Frey v. Barnes Hospital, 706 S.W.2d 51, 56 (Mo. Ct. App. 1986) (applied balancing test to admit prior inconsistent statement in deposition).

[77] No. 07-58765 (Miss. May 30, 1990).

say rule.[78] In a dissenting opinion, Justice Robertson countered that the trial judge should have used the balancing test in Rule 403, and allowed the evidence to come in.[79] Using Rule 403 would then eliminate "guessing" the motives of counsel involved and instead focus the trial court's attention on the evidence itself.

Although the Mississippi Supreme Court has yet to give a majority ruling on the Rule 403 issue, the effect of impeachment evidence by prior inconsistent statements should be measured by the balancing test found in Rule 403. The Mississippi Supreme Court has called Rule 403 the "ultimate filter through which all otherwise admissible evidence must pass."[80] If Rule 607 were amended to require that it be applied in conjunction with Rule 403, the effect of highly prejudicial prior inconsistent statements would be reduced. Because Rule 403 allows the exclusion of otherwise relevant evidence if the danger of unfair prejudice substantially outweighs its probative value, attempts by attorneys to abuse the impeachment process would be curtailed, and the probability of misuse of such evidence by juries would certainly decrease.

CONCLUSION

The benefits to the Mississippi court system of using the Rule 403 balancing test in conjunction with Rule 607 are clearly evident. As previously discussed, the defendant in *Brown v. State*[81] would not have been convicted but for the impeachment evidence of prior inconsistent statements.[82] Had the balancing process in Rule 403 been employed,

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[78] *Cooper*, No. 07-58765, slip op. at 8. The witness, sister of one of the defendants in an arson trial which also involved bad faith claims against the insurer, recanted her story prior to trial. *Id.* slip op. at 5. She allegedly telephoned a State Farm agent to say that her sister aided in burning the house in question. *Id.* Since she denied this conversation prior to trial, the Coopers' attorney moved to have this testimony excluded on the basis that it was offered only for the purpose of getting the prior inconsistent statement before the jury. *Id.* The majority in *Cooper* agreed that this was the "primary purpose" State Farm had in wanting to introduce the statement. *Id.* slip op. at 8.

[79] Cooper v. State Farm Fire & Casualty Co., No. 07-58765, slip op. at 10 (Miss. May 30, 1990) (Robertson, J., dissenting). Justice Robertson stated that the evidence was offered not to impeach the witness, or to get otherwise inadmissible evidence before the jury, but to show only that the call to State Farm was made, thus becoming part of State Farm's basis for refusing to pay the claim. *Id.* slip op. at 11. Since this evidence goes to show State Farm's state of mind at the time it refused the claim, it is not hearsay. *Id.* In this instance, Justice Robertson concluded that the probative value of the evidence outweighed its prejudicial effect and should have been allowed. *Id.* slip op. at 12.

[80] Ford v. State, 550 So. 2d 691, 693 (Miss. 1989).

[81] Brown v. State, 556 So. 2d 338 (Miss. 1990).

[82] *See supra* notes 52-55 and accompanying text.

the trial judge would most likely have excluded this evidence as being highly prejudicial to the defendant, since it was the only substantive evidence the State had to offer. The relevance of the witnesses' credibility in *Brown* would seem to be substantially outweighed by the risk of unfair prejudice to the defendant. The impeachment process in *Brown* resulted in misuse by the jury, particularly since no limiting instruction was given. This is precisely the type of prejudice Rule 403 was fashioned to prevent.[83] A time and resource consuming appeal could therefore have been avoided.

Similarly, in *Cooper v. State Farm Fire & Casualty Co.*,[84] the statements of the defense witness could have been admitted into evidence based upon the weight of their probative value rather than excluded under the limitations of Rule 801(d)(1)(A).[85] The impeachment process in *Cooper* resulted in abuse of Rule 607, again signifying the type of practice Rule 403 was drafted to prevent. Had the Rule 403 balancing test been used, there would have been no reversible error, and the needless expenses of an appeal and new trial could have been avoided.

Because Rule 607 allows impeachment of any witness by any party, the balancing process of Rule 403 must be approached on a case-by-case basis. By applying this balancing scheme, the trial judge has the discretion to allow or exclude the prior inconsistent statement offered for impeachment purposes. Rule 607 would then be tempered by this interrelation with other rules of evidence, and abuse and misuse of the impeachment process would decrease dramatically. In the interests of fair trials, fair trial tactics, and judicial economy, the Mississippi Supreme Court is urged to amend Rule 607 to require the utilization of Rule 403 before prior inconsistent statements may be used to impeach.

Nancy M. Maddox

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[83] *See* 2 D. Louisell & C. Mueller, *supra* note 39, § 299, at 194.

[84] Cooper v. State Farm Fire & Casualty Co., No. 07-58765 (Miss. May 30, 1990).

[85] *See supra* notes 78-79 and accompanying text.

RECENT DECISIONS

Federal Jurisdiction — Pendent Party Jurisdiction — Pendent Party Jurisdiction Is Not Applicable to Actions Brought Under the Federal Tort Claims Act*

Petitioner[1] brought a tort action against the defendant[2] in the United States District Court for the Southern District of California seeking damages under the Federal Tort Claims Act (FTCA)[3] alleging negligence in the operation and maintenance of airport runway lights and the performance of air traffic control functions.[4] Petitioner later moved to amend her complaint to include additional local parties over whom there was no independent basis for federal jurisdiction.[5] The

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* Best 1989 student-written casenote. Award by Ott & Purdy, Ltd., Jackson, Mississippi.

[1] Petitioner's husband and two children were killed on the night of November 11, 1983, when their twin engine plane struck electric transmission lines during an approach to an airfield in San Diego, California. Finley v. United States, 109 S. Ct. 2003, 2005 (1989).

[2] *Finley*, 109 S. Ct. at 2005. Petitioner originally brought this tort action in state court against local defendants. *Id.* Petitioner claimed that San Diego Gas and Electric Company negligently positioned and inadequately illuminated the transmission lines with which the aircraft collided. *Id.* Petitioner further claimed that the City of San Diego through negligent maintenance rendered the runway lights inoperative the night of the crash. *Id.* Petitioner later discovered the Federal Aviation Administration was the party responsible for the runway lights and filed this action against the United States in the United States District Court for the Southern District of California. *Id.*

[3] 28 U.S.C. § 1346(b) (1982). The Federal Tort Claims Act (FTCA) provides in part that the federal district courts shall have exclusive jurisdiction of civil actions on claims against the United States caused by the negligent act or omission of any employee of the Government while acting within the scope of his office or employment. *Id.*

[4] *Finley*, 109 S. Ct. at 2005.

[5] *Id.* Petitioner's motion was to amend her complaint to include San Diego Gas and

United States District Court for the Southern District of California granted the motion, asserted pendent party jurisdiction[6] over the local defendants, and certified an interlocutory appeal.[7] The United States Court of Appeals for the Ninth Circuit summarily reversed, and the United States Supreme Court granted certiorari.[8] The Court *held*, affirmed. Where the FTCA confers jurisdiction over civil actions on claims against the United States, it does not permit the exercise of pendent party jurisdiction to reach defendants other than the United States. *Finley v. United States*, 109 S. Ct. 2003 (1989).

It is a fundamental principle of American jurisprudence that federal courts are courts of limited jurisdiction.[9] Despite this well founded principle, the United States Supreme Court has created an exception in authorizing federal courts to exert pendent claim jurisdiction in particular circumstances.[10] The basic premise of pendent jurisdiction first

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Electric, as well as the City of San Diego, in the federal action. *Id.* This created a jurisdictional situation known as pendent party jurisdiction. *Id.* The most common pendent party case involves a plaintiff with related state and federal claims against both federal and nonfederal defendants. Note, *Unravelling the Pendent Party Controversy: A Revisionist Approach to Pendent and Ancillary Jurisdiction*, 64 B.U.L. REV. 895, 907 (1985) (authored by Samuel Hoar, Jr.).

[6] *Finley*, 109 S. Ct. at 2005. The issue in this case involved the permissibility of pendent party jurisdiction, specifically with regards to a claim brought under the FTCA. *Id.* at 2006. The Court defined pendent party jurisdiction as jurisdiction over parties not named in any claim that is independently cognizable by the federal court. *Id.*

[7] *Id.* at 2005. The district court certified the interlocutory appeal pursuant to 28 U.S.C. § 1292(b) (1982). *Finley*, 109 S. Ct. at 2005.

[8] *Finley*, 109 S. Ct. at 2005. The Court granted certiorari to resolve the split among the federal courts of appeal on whether the FTCA permitted the assertion of pendent jurisdiction over additional parties. *Id.*

[9] 13 C. WRIGHT, A. MILLER & E. COOPER, FEDERAL PRACTICE AND PROCEDURE § 3522 (2d ed. 1984) [hereinafter WRIGHT & MILLER]. The judicial power of the federal courts is defined by Article III of the United States Constitution and statutorily placed in effect by Congress. *Id.* It is an unconstitutional invasion of the powers reserved to the states if the federal courts were to entertain cases not within their jurisdiction. *Id.* Only the jurisdiction of the Supreme Court is derived directly from the Constitution. Kline v. Burke Constr. Co., 260 U.S. 226, 234 (1922). Federal courts derive their jurisdiction wholly from the authority of Congress. *Id.*; *see, e.g.*, Bender v. Williamsport Area School Dist., 475 U.S. 534, 541 (1986)(stating federal courts are not courts of general jurisdiction); The Mayor v. Cooper, 73 U.S. (6 Wall.) 247, 252 (1868)(defining jurisdiction for all federal courts inferior to United States Supreme Court); Sheldon v. Sill, 48 U.S. (8 How.) 441, 449 (1850)(courts created by statute can have jurisdiction only as statute confers); Cary v. Curtiss, 44 U.S. (3 How.) 237, 245 (1845)(Congress possesses sole power to create jurisdiction for federal courts); *Ex parte* Bollman, 8 U.S. (4 Cranch) 75, 94 (1807)(limiting federal courts jurisdiction to that provided by written law).

[10] 13 WRIGHT & MILLER, *supra* note 9, § 3565.1. Pendent claim jurisdiction allows a federal court to exert jurisdiction over nonfederal claims between parties litigating other

appeared in *Osborn v. Bank of the United States*.[11] In *Osborn*, the Bank of the United States sued in a federal court to enjoin enforcement of a tax levied on it by the State of Ohio.[12] The United States Supreme Court announced the general proposition that federal courts had jurisdiction over the "entire or whole case."[13] The Court held Congress conferred jurisdiction over nonfederal questions when a federal question was a part of the original case.[14]

One hundred and nine years later the United States Supreme Court again faced the pendent jurisdiction question in *Hurn v. Oursler*[15] and for the first time established a standard to govern the extension of pendent jurisdiction.[16] The petitioner in *Hurn* alleged a viola-

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matters properly before the court. *Id.* This exception is a judge-made doctrine of discretion and not a plaintiff's right; however, it is based on considerations of judicial economy and fairness to the litigant. *Id.*; *see* O'Brien v. Continental Ill. Nat'l. Bank & Trust Co., 443 F. Supp. 1131, 1133-35 (N.D. Ill. 1977)(discussion of long and torturous history of pendent jurisdiction).

[11] 22 U.S. (9 Wheat.) 738 (1824).

[12] *Osborne*, 22 U.S. at 739-40. The statute chartering the bank established federal jurisdiction. *Id.* at 805. The State of Ohio challenged the federal jurisdiction as unconstitutional. *Id.* at 744-45.

[13] *Id.* at 823. The Court held article III granted jurisdiction over federal cases, and the grant was broad enough to permit adjudication of state law questions as long as the federal question also formed an ingredient of the original cause. *Id.*

[14] *Id.* Chief Justice Marshall looked to both the Constitution and a jurisdictional statute in upholding the power of the federal courts to determine mixed questions of state and federal law. *Id.* This concept born in *Osborn* eventually diverged into two basic themes, pendent jurisdiction and ancillary jurisdiction. Miller, *Ancillary and Pendent Jurisdiction*, 26 S. Tex. L.J. 1, 1 (1985). The doctrine of ancillary jurisdiction encompasses a far broader range of circumstances than pendent jurisdiction. Note, *supra* note 5, at 907-11; *see also* Fulton Nat'l. Bank v. Hozier, 267 U.S. 276, 280 (1925)(ancillary controversy had direct relation to property or assets); Supreme Tribe of Ben Hur v. Cauble, 255 U.S. 356, 366 (1921)(class action suit was brought by nonresidents, but class contained residents of same state as defendant); Stewart v. Dunham, 115 U.S. 61, 64 (1885)(where federal court had jurisdiction based on diversity, admission of nondiverse parties did not oust court of jurisdiction); Freeman v. Howe, 65 U.S. (24 How.) 450, 459 (1860)(bill filed in equity to restrain or regulate judgments of cases already properly before federal court was ancillary and maintained without independent basis for jurisdiction). *See generally* Matasar, *A Pendent and Ancillary Jurisdiction Primer: The Scope and Limits of Supplemental Jurisdiction*, 17 U.C. Davis L. Rev. 103, 141-56 (1983)(discussion of basic structure of pendent and ancillary jurisdiction); Note, *Rule 14(a) and Ancillary Jurisdiction: Plaintiff's Claim Against Non-Diverse Third-Party Defendants*, 33 Wash. & Lee L. Rev. 796, 798-812 (1976) (authored by Samuel J. Webster)(discussion of effect of Rule 14(a), Federal Rules of Civil Procedure, on ancillary jurisdiction).

[15] 289 U.S. 238 (1933).

[16] *Hurn*, 289 U.S. at 246. Prior to *Hurn* the United States Supreme Court had considered another pendent jurisdiction case. Siler v. Louisville & Nashville R.R. Co., 213 U.S. 175, 177 (1909). In *Siler* the Court extended the holding in *Osborn* and granted

tion of the copyright laws of the United States and also asserted claims under state tort law for unfair competition and business practices.[17] The Court held pendent jurisdiction was proper if the two claims arose from the same cause of action, and the federal claim was not plainly wanting in substance.[18]

Questions involving the same or single cause of action standard set

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federal courts the power to decide all questions in the case. However, the Court either decided the federal questions adversely to the party raising them or omitted the federal questions and decided the case on local or state questions alone. *Id.* at 191. The Railroad claimed a Kentucky statute violated the Commerce Clause of the Constitution and was unauthorized under state law. *Id.* at 177. The Court ruled on the state law claim without ever reaching the federal claim. *Id.* at 193. The Court noted the federal question was not merely colorable and was not brought for the purpose of obtaining jurisdiction. *Id.* at 192. The Court justified their decision by standing on the general principle that constitutional interpretation should be avoided when a case can be decided on other grounds. *Id.* It should be noted that the *Siler* holding is doubtful authority for federal claims not based on the Constitution. Comment, Aldinger v. Howard *and Pendent Jurisdiction*, 77 COLUM. L. REV. 127, 131 n.26 (1977) (authored by Geoffrey P. Miller).

[17] *Hurn*, 289 U.S. at 246. In *Hurn* the petitioner brought an action to enjoin the defendant from performing a particular part of a play. *Id.* at 239. Petitioner alleged defendant's action violated the copyright laws of the United States and constituted unfair business practice and unfair competition under state tort law. *Id.* The district court on the merits determined there was no violation of United States copyright laws; thus, the Court was without jurisdiction to entertain the other state law claims. *Id.* at 240.

[18] *Id.* at 246. The Court stated they had no intention of laying down a hard and fast test to determine in all situations what constituted a cause of action but sought only to determine the bounds between state and federal jurisdiction. *Id.* at 247. The *Hurn* Court disregarded the requirement laid down by the *Osborn* Court which required that pendent jurisdiction be granted by statute. Comment, *supra* note 16, at 133. However, the *Hurn* test was so strict that any erosion of the *Osborne* principle was minimized. *Id.* While it did not expressly address the statutory limitation on federal jurisdiction, the *Hurn* decision did little to undermine it. *Id.*

The United States Supreme Court concluded where a case had two distinct grounds in support of a single cause of action and the federal ground was clearly not wanting in substance, then the federal court should retain and dispose of the case. *Hurn*, 289 U.S. at 246. Further, the Court reasoned the federal ground need not be established. *Id.* However, a case of two separate and distinct causes of action would not allow adjudication of the nonfederal claim if the federal claim was not established. *Id.* In *Hurn*, the Court determined the federal claim was substantial and the nonfederal claim arose from the same cause of action. *Id.*; *see* Levering & Garrigues Co. v. Morrin, 289 U.S. 103, 105 (1933) (determining when federal question is substantial enough to allow pendent jurisdiction under *Hurn*); Stark Bros. Nurseries & Orchards Co. v. Stark, 255 U.S. 50, 51 (1921) (Court assumed without deciding that plaintiff could recover for unfair competition inseparable from federal statutory wrong but could not reach back in time and recover earlier injuries). *See generally* Note, *The Doctrine of* Hurn v. Oursler *and the New Judicial Code*, 37 IOWA L. REV. 406, 412-15 (1952) (authored by John E. Wagner) (discussion of incorporation of *Hurn* rule into 1948 Judicial Code).

forth by *Hurn* created difficulties and uncertainty in application among the lower courts.[19] The *Hurn* doctrine was purportedly codified in the 1948 Judicial Code,[20] but the statute did little to clarify the standard.[21] In *United Mine Workers v. Gibbs*[22] the Court re-examined the *Hurn* test and found it "unnecessarily grudging."[23] In *Gibbs*, the

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[19] *See* Errion v. Connell, 236 F.2d 447, 454 (9th Cir. 1956) (allowed jurisdiction where single fraudulent scheme arising out of same set of facts encompassed different types of property); Kleinman v. Betty Dain Creations, Inc., 189 F.2d 546, 548 (2d Cir.) (dismissed jurisdiction and required substantially identical facts), *aff'g*, 88 F. Supp. 637 (S.D.N.Y. 1949); French Renovating Co. v. Ray Renovating Co., 170 F.2d 945, 947 (6th Cir. 1948) (dismissed jurisdiction and required substantially identical facts); Treasure Imports v. Henry Amdur & Sons, 127 F.2d 3, 5 (2d Cir. 1942) (allowed jurisdiction where nonfederal issue could hardly have been separated so far as presentation of evidence was concerned); Musher Found., Inc. v. Alba Trading Co., 127 F.2d 9, 10 (2d Cir.) (dismissed jurisdiction where no substantial identity existed between proof of federal and nonfederal claim), *cert. denied*, 317 U.S. 641 (1942); Brown v. Bullock, 194 F. Supp. 207, 220 (S.D.N.Y. 1961) (required federal and nonfederal claims to rest upon same facts); Darwin v. Jess Hickey Oil Corp., 153 F. Supp. 667, 673 (N.D. Tex. 1957) (required same identical facts to prove both federal and nonfederal claim). *See generally* C. WRIGHT, HANDBOOK OF THE LAWS OF FEDERAL COURTS 72-77 (3d ed. 1976) (explanation of federal judicial system); Gavit, *A "Pragmatic" Definition of the "Cause of Action"*, 82 U. PA. L. REV. 129, 132-39 (1933) (discussion of confusion surrounding "cause of action"); H. Shulman & E. Jaegerman, *Some Jurisdictional Limits on Federal Procedure*, 45 YALE L.J. 393, 397-410 (1936) (discussion of expanding jurisdiction shortly after *Hurn* decision); Note, *The Evolution and Scope of the Doctrine of Pendent Jurisdiction in the Federal Courts*, 762 COLUM. L. REV. 1018, 1026-30 (1962) (discussion of expansion of pendent jurisdiction and possible future consequences).

[20] 28 U.S.C. § 1338(b) (1948). This statute stated in part that the district court shall have original jurisdiction of any civil action asserting a claim of unfair competition when joined with a substantial and related claim under the copyright, patent, or trademark laws. *Id.*

[21] Note, *supra* note 18, at 412. Relief from the confusion surrounding the *Hurn* test was apparently the congressional intent behind the enactment of 28 U.S.C. § 1338(b) (1948). Note, *supra* note 18, at 411-12. There was even divergence in the interpretation of the *Hurn* doctrine among judges on the same bench. *See Treasure Imports*, 127 F.2d at 5 (trademark cases where judges split 2-1 on application of *Hurn*). *See generally* C. WRIGHT, *supra* note 19, at 73-75 (explanation of federal judicial system). However, 28 U.S.C. § 1338(b) failed to alleviate the confusion. Note, *supra* note 18, at 412.

[22] 383 U.S. 715 (1966).

[23] *Gibbs*, 383 U.S. at 725. Gibbs brought suit in federal district court against United Mine Workers on two claims. *Id.* at 720. Gibbs based the first claim on § 303 of the Labor Management Relations Act. *Id.* The second claim was based on tortious interference with business relationships provided for by state law. *Id.* The trial court held that Gibbs failed to establish his federal claim but should have prevailed on the state claim. *Id.* at 720-21. The union argued the court lacked jurisdiction to give judgment on the state claim. *Id.* The United States Supreme Court noted a tendency under *Hurn v Oursler*, 289 U.S. 238 (1933) for courts to limit application of pendent jurisdiction to cases in which the state and federal claims were ". . . little more than the equivalent of different

Court unanimously redefined the standard for pendent jurisdiction.[24] The *Gibbs* Court addressed a situation where the relationship between the state claim and the federal claim permitted the conclusion that the entire action comprised but one constitutional case.[25] Additionally, the federal claim was sufficient to confer subject matter jurisdiction, and the state and federal claims were derived from a "common nucleus of operative facts."[26] Finally, the claims were such that they would normally be tried in one judicial proceeding; hence, the Court concluded there was power in the federal court to hear the "whole case."[27] This new standard for pendent *claims* allowed for much more flexibility than any previous standard; however, the extension to pendent *parties* was wholly unexpected.[28] Despite the fact that *Gibbs* involved only pendent claims, many lower courts were quick to expand the common sense considerations underlying the *Gibbs* language to include pendent parties.[29]

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epithets to characterize the same group of circumstances." *Gibbs*, 383 U.S. at 724 (quoting Hurn v. Oursler, 289 U.S. 238, 246 (1933)).

[24] *Id.* at 725. The justification for pendent jurisdiction was grounded in consideration of judicial economy and fairness to the litigants. *Id.* at 726. The United States Court of Appeals for the First Circuit recognized that pendent jurisdiction is a doctrine of discretion and not a plaintiff's right. Massachusetts Universalist Convention v. Hildreth & Rodgers Co., 183 F.2d 497, 501 (1st Cir. 1950); *see also* Moynahan v. Pari-Mutual Employees Guild, 317 F.2d 209, 211-12 (9th Cir.) (court dismissed pendent claim when federal claim was dismissed for failure to state cause of action), *cert. denied*, 375 U.S. 911 (1963).

[25] *Gibbs*, 383 U.S. at 725. The Court noted that needless litigation of state law claims should be avoided. *Id.* at 726. If the federal claim was dismissed before trial, the Court determined the state claim should be dismissed also. *Id.* The Court further noted, where the state issue was substantially the predominant issue, the state claim may be dismissed. *Id.*

[26] *Id.* at 725. The Court recognized that the Federal Rules of Civil Procedure did not expand the jurisdiction of the federal courts. *Id.* at 725 n.13. Nonetheless, the Court concluded the decision in *Gibbs* embodied the spirit of the Federal Rules. *Id.*; *see* Armstrong Paint & Varnish Works v. NU-Enamel, Corp., 307 U.S. 315, 325 (1938) (invalidity of federal claim did not divest federal court of jurisdiction over nonfederal claim).

[27] *Gibbs*, 383 U.S. at 725. The Court noted this power to hear the "whole case" need not be exercised in every instance but should be left to the discretion of the federal courts. *Id.* at 726. The Court noted there were reasons other than jurisdictional considerations, such as the likelihood of jury confusion, which justified the state claim being separated from the federal claim. *Id.* at 727.

[28] WRIGHT & MILLER, *supra* note 9, § 3567.2. The typical pendent party case involves a plaintiff with related state and federal claims against both federal and nonfederal defendants. Note, *supra* note 5, at 907-08. The plaintiff is attempting to attach federal jurisdiction to the nonfederal defendant based solely on the closely related nature of the claims. *Id.*

[29] Astro-Honor, Inc. v. Grosset & Dunlap, Inc., 441 F.2d 627, 629 (2d Cir. 1971). The

The United States Supreme Court declined ruling on the validity of pendent party jurisdiction twice in the 1970's.[30] Then in *Aldinger v.*

United States Court of Appeals for the Second Circuit utilized the test in *Gibbs* along with considerations of judicial economy and fairness to conclude it reasonable to extend pendent jurisdiction to pendent parties. *Id.* at 629-30. The court held that a federal court may at its discretion entertain a state claim against a party not named in the federal claim if the state claim meets the *Gibbs* test. *Id.* at 630.

Pendent party jurisdiction found favor with the lower courts in a wide range of jurisdictional areas such as insufficient jurisdictional amounts, incomplete diversity and the absence of federal question jurisdiction. *See, e.g.*, Leather's Best, Inc. v. S.S. Mormaclynx, 451 F.2d 800, 811 (2d Cir. 1971) (state tort claim deemed pendent to admiralty claim); F.C. Stiles Contracting Co. v. Home Ins. Co., 431 F.2d 917, 919 (6th Cir. 1970) (when multiple claims were above jurisdictional amount, court extended pendent jurisdiction over claims which were independently less than jurisdictional amount); Hatridge v. Aetna Casualty & Sur. Co., 415 F.2d 809, 812 (8th Cir. 1969) (wife's insufficient loss of consortium claim held pendent to husband's sufficient personal injury claim); Stone v. Stone, 405 F.2d 94, 98 (4th Cir. 1968) (plaintiff's two jurisdictionally insufficient claims were added together to suffice jurisdictional amount), *rev'd in part on other grounds*, 460 F.2d 64 (4th Cir.), *cert. denied*, 409 U.S. 1000 (1972); Connecticut Gen. Life Ins. Co. v. Craton, 405 F.2d 41, 48 (5th Cir. 1968) (insurance contract claim deemed pendent to federal labor claim); Witlersheim v. General Transp. Servs., Inc., 378 F. Supp. 762, 764 (D. Va. 1974) (plaintiff allowed to assert separate but related claims against both diverse and nondiverse corporation in same action); Campbell v. Triangle Corp., 336 F. Supp. 1002, 1006 (D. Pa. 1972) (plaintiff allowed to assert claims against diverse parent corporation and nondiverse subsidiary corporation). *But see* Hampton v. City of Chicago, 484 F.2d 602, 611 (7th Cir. 1973) (joinder of common law tort claim against city with federal claim against police denied), *cert. denied*, 415 U.S. 917 (1974); Hymer v. Chai, 407 F.2d 136, 138 (9th Cir. 1969) (joinder of diversity claim for personal injury and loss of consortium claim by spouse denied); Williams v. United States, 405 F.2d 951, 954 (9th Cir. 1969) (state tort claim denied pendent jurisdiction to FTCA claim).

[30] *See* Philbrook v. Glodgett, 421 U.S. 707, 721 (1975) (substantive issue decided by district court would have been decided same even if pendent party had not been joined); Moor v. County of Alameda, 411 U.S. 693, 715 (1973) (district court did not abuse discretionary power in dismissing pendent claim), *aff'g in part and rev'g in part* Moor v. Madigan, 458 F.2d 1217 (9th Cir. 1972).

The Court in *Moor* noted that whether judicial power existed to hear pendent party claims was a subtle and complex question with far reaching implications. *Moor*, 411 U.S. at 715. The Court noted that the district court in *Moor* had indicated two reasons pendent party jurisdiction was inappropriate. *Id.* First, the district court was called on to resolve difficult questions of state law. *Id.* at 716. Secondly, pendent party jurisdiction created undue complication for the jury. *Id.* The Supreme Court in *Moor* questioned the Ninth Circuit's position on pendent party jurisdiction in *Hymer v. Chai*, 407 F.2d 136 (9th Cir. 1969), and noted that the Ninth Circuit stood virtually alone against the post-*Gibbs* trend extending pendent party jurisdiction. *Moor*, 411 U.S. at 714-15. Nonetheless, the Court refused to openly bless pendent party jurisdiction. *Id.* at 715.

In *Philbrook* the Court expressly made an exception to the general rule of inquiring into the jurisdiction of the district courts. *Philbrook*, 421 U.S. at 721. The Court recognized the issue as a complex question of federal jurisdiction but refused a direct ruling.

Howard,[31] the pendent party issue directly confronted the Court.[32] The Court in *Aldinger* declined to make a broad ruling on pendent party jurisdiction in general but chose instead to exclude it with respect to claims brought under the specific federal statute involved.[33] The Court concluded that before a federal court may allow pendent party jurisdiction, Article III of the Constitution must permit jurisdiction and Congress must not have expressly or by implication negated its existence.[34]

The Supreme Court's refusal to directly confront the issue of pendent party jurisdiction resulted in confusion among the lower federal courts as to whether the policy considerations which supported pen-

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Id. See generally Matasor, *supra* note 14, at 157-60 (discussion of basic structure of pendent and ancillary jurisdiction); Note, *Pendent Party Jurisdiction and Section 1983: When Has Congress "By Implication Negated" Jurisdiction*, 14 FORDHAM URB. L. REV. 873, 898-902 (1986) (authored by Janet E. Schomer) (discussion of pendent party jurisdiction under Title 42 section 1983 actions).

[31] 427 U.S. 1 (1976).

[32] *Aldinger*, 427 U.S. at 3-4. In *Aldinger* the petitioner was discharged from her job without a hearing by the County Treasurer. *Id.* at 3. Petitioner brought suit against the Treasurer, the county and other county officers in federal district court. *Id.* at 4. Jurisdiction over the federal claim was asserted under 28 U.S.C. § 1343(3) (1982), and pendent jurisdiction was alleged over the state law claim against the county. *Aldinger*, 427 U.S. at 4.

After tracing both pendent and ancillary jurisdiction precedent through some 150 years, the Court declined to distinguish between the two. *Id.* at 13. However, the Court established United Mine Workers v. Gibbs, 383 U.S. 715 (1966), as the "yardstick" standard and sought to determine the differences between the jurisdiction sustained in *Gibbs* and that asserted by petitioner. *Aldinger*, 427 U.S. at 13. The Court noted in *Gibbs* the additional pendent claims were added against a party already properly in federal court. *Id.* at 14. The situation with respect to joining a new party was factually and legally different. *Id.* The Court stated this concept ran contrary to the concept that federal courts are courts of limited jurisdiction. *Id.* at 14-15. The Court also noted another significant difference in that by virtue of the statutory grant of subject matter jurisdiction Congress had addressed intent where jurisdiction should vest. *Id.* at 16.

[33] *Aldinger*, 427 U.S. at 18. The Court recognized that other statutory grants and other alignments of parties might call for different results. *Id.* The Court specifically pointed out that exclusive federal jurisdiction was one area which might produce different results. *Id.*

[34] *Id.* The Court concluded Congress had by implication negated federal jurisdiction. *Id.* at 19. Justice Brennan filed a dissenting opinion joined by Justices Blackmun and Marshall. *Id.* Justice Brennan concluded Congress had not negated jurisdiction. *Id.* at 24. Additionally, in the interest of judicial economy and fairness, pendent party jurisdiction should be extended. *Id.* at 35. *See generally* Note, Aldinger v. Howard, *Title VII and Pendent Jurisdiction: Has the Tail Been Cut from the Dog?*, 63 U. DET. L. REV. 723, 727-43 (1986) (authored by William H. Hackel III) (discussion of historical development of pendent jurisdiction and its relationship to Title VII).

dent claim jurisdiction in *United Mine Workers v. Gibbs*[35] could be used to support pendent party jurisdiction.[36] In *Ayala v. United States*[37] the United States Court of Appeals for the Ninth Circuit refused to grant pendent party jurisdiction.[38] In *Ayala*, numerous parties sought to append state tort law claims against a local manufacturer to their federal claims against the United States under the FTCA.[39] Those petitioners who did not satisfy the diversity statute as to the claims against the local manufacturer[40] urged the court to extend the doctrine of pendent jurisdiction to include the local manufacturer as a pendent party.[41] The Ninth Circuit refused to be bound by dicta in *Aldinger v. Howard*[42] and without deciding the statutory standard held that Article III of the Constitution precluded pendent party jurisdiction.[43]

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[35] United Mine Workers v. Gibbs, 383 U.S. 715 (1966).

[36] Grimes v. Chrysler Motors Corp., 565 F.2d 841, 844 (2d Cir. 1977); *see* Feigler v. Tidex, Inc., 826 F.2d 1435, 1437-40 (5th Cir. 1987) (good discussion and analysis of split among circuit courts of appeal).

[37] 550 F.2d 1196 (9th Cir. 1977), *cert. dismissed*, 435 U.S. 982 (1978).

[38] *Ayala*, 550 F.2d at 1200. Judge Choi, writing for the Ninth Circuit, noted a fundamental difference between pendent claims and pendent parties. *Id.* at 1198. The Ninth Circuit had previously held that in order for a claim against other parties to be joined with an FTCA claim, an independent ground for jurisdiction must exist. Williams v. United States, 405 F.2d 951, 954 (9th Cir. 1969). The theory of pendent party jurisdiction was not sufficient. *Id.*

[39] *Ayala*, 550 F.2d at 1197. Petitioner sought recovery for damages which arose out of an explosion of bomb-laden boxcars. *Id.* Both boxcars and the tritional-filled bombs were the property of the United States and were being transported under government contract. *Id.*

[40] *Id.* Some petitioners were unable to meet the requirements of diversity either because they were nondiverse to the local manufacturer or because their claims were under the jurisdictional limit. *Id.*

[41] *Id.* Petitioners offered two distinct theories for the extension of pendent jurisdiction to pendent parties. *Id.* at 1198. The principle theory involved joinder of the manufacturer as a pendent party defendant jointly and severally liable with the United States. *Id.* The second theory asserted that petitioners were pendent party plaintiffs. *Id.* Under either theory the ultimate result was resolution of all claims in one federal trial. *Id.*

[42] Aldinger v. Howard, 427 U.S. 1, 18 (1976).

[43] *Ayala*, 550 F.2d at 1200. In *Aldinger* the Court had suggested that other statutory grants and alignments of parties might call for a different result. *Aldinger*, 427 U.S. at 18. The Ninth Circuit reasoned even assuming Congress had not explicitly or by implication prohibited the exercise of pendent party jurisdiction there remained the "problem" of limited federal jurisdiction under article III. *Ayala*, 550 F.2d at 1199; *see also* Danner v. Himmelfarb, 858 F.2d 515, 522 (9th Cir. 1988) (restated Ninth Circuit's long standing refusal to recognize pendent party jurisdiction), *cert. denied*, 109 S. Ct. 2069 (1989); Hymer v. Chai, 407 F.2d 136, 137 (9th Cir. 1969) (pendent jurisdiction allowed joinder of claims not parties); Williams v. United States, 405 F.2d 951, 954 (9th Cir. 1969) (state

A subsequent Supreme Court decision, *Owen Equipment & Erection Co. v. Kroger*, failed to clarify the confusion surrounding pendent party jurisdiction.[44] In *Kroger*, federal jurisdiction was based on diversity of citizenship, and absent the exercise of pendent jurisdiction the federal court was powerless to hear the state tort claim.[45] The Court refused to grant pendent jurisdiction because Congress had explicitly precluded pendent jurisdiction of parties with regard to diversity actions.[46] The Court further noted that neither the convenience of the litigants nor considerations of judicial economy sufficed to justify extension of the doctrine of ancillary jurisdiction to a plaintiff's cause of action against a nondiverse defendant in a diversity action.[47]

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tort claim denied pendent jurisdiction to FTCA claim).

[44] 437 U.S. 365, 367 (1978).

[45] *Kroger*, 437 U.S. at 367, 370. James Kroger was electrocuted when the boom of a crane, next to which he was walking, came too close to electric power lines. *Id.* at 367. His widow filed a wrongful death action against the power company in federal district court. *Id.* The power company filed a third party complaint impleading Owen Equipment and Erection Company, the owner and operator of the crane. *Id.* at 368. The power company moved for summary judgment, and Kroger moved to amend her complaint to include Owen. *Id.* Both motions were granted, and the case went to trial as between Kroger and Owen Equipment and Erection Company alone. *Id.*

On the third day of trial the court discovered Owens' principle place of business was in the state in which Kroger resided, thereby destroying diversity. *Id.* at 369. Owen moved to dismiss for lack of jurisdiction based upon the nondiversity of the parties. *Id.* The district court denied the motion. *Id.* The parties did not dispute the fact that no federally independent basis for Kroger's state law tort action existed. *Id.* at 370.

[46] *Id.* at 375. The relevant statute in the case required complete diversity of citizenship for claims in the federal forum. 28 U.S.C. § 1332(a)(1) (1982).

In refusing to grant jurisdiction over the parties, the Supreme Court reasoned constitutional power was merely the "first hurdle" in determining jurisdiction. *Kroger*, 437 U.S. at 372. Congress also had the power to limit the jurisdiction of federal courts. *Id.* at 374 (citing Aldinger v. Howard, 427 U.S. 1, 18 (1976)); *see* Zahn v. International Paper Co., 414 U.S. 291, 301 (1973) (Court held in diversity class action that each member of class must independently satisfy minimum jurisdictional amount).

The Court in *Kroger* contended that a plaintiff cannot complain if supplemental jurisdiction did not encompass all of his possible claims. *Kroger*, 437 U.S. at 376. Plaintiff Kroger chose the federal forum and must accept its limitations. *Id.* Additionally, the Court noted that the efficiency the plaintiff sought was readily available without question in state court. *Id.* at 376 (citing Kenrose Mfg. Co. v. Fred Whitaker Co., 512 F.2d 890, 894 (4th Cir. 1972)). Consequently, allowing the requirement of complete diversity to be circumvented in this manner would "flout the congressional command." *Id.* at 377.

[47] *Kroger*, 437 U.S. at 377. Although the Court discussed the issue in terms of ancillary jurisdiction, they found it unnecessary to determine whether there were any "principled" differences between pendent and ancillary jurisdiction. *Id.* at 370 n.8. *See generally* Freer, *A Principled Statutory Approach to Supplemental Jurisdiction*, 1987 DUKE L.J. 34, 61-74 (discussion of statutory authorization for pendent and ancillary jurisdiction as well as Court's interpretation and implementation).

After *Kroger*, the issue of pendent party jurisdiction again arose in the circuit courts, and the United States Court of Appeals for the Second Circuit addressed the pendent party jurisdictional question under the FTCA in *Ortiz v. United States*.[48] In *Ortiz*, the petitioner sought to join a nonfederal tort claim against a private hospital with an action against the United States under the FTCA.[49] Unlike the Ninth Circuit in *Ayala v. United States*,[50] the Second Circuit examined pendent party jurisdiction under constitutional and statutory standards and found that Congress had neither expressly nor impliedly precluded the exercise of pendent party jurisdiction under the FTCA.[51] The court determined that *United Mine Workers v. Gibbs*[52] was the proper standard by which to test the constitutional issue and remanded the case for a factual determination as to whether the *Gibbs* test was satisfied.[53]

The United States Court of Appeals for the Tenth Circuit also considered both statutory and constitutional standards for determining the pendent party issue under the FTCA in *Stewart v. United States*.[54] The Tenth Circuit granted pendent party jurisdiction[55] when the petitioner brought suit against the United States under the FTCA

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[48] 595 F.2d 65 (1st Cir. 1979).

[49] *Ortiz*, 595 F.2d at 66. Petitioners sued the United States for the alleged negligence of a Veterans Hospital. *Id.* Petitioners sought to add a nonfederal tort claim against a private hospital. *Id.* The district court refused to assert jurisdiction over the private hospital. *Id.*

[50] Ayala v. United States, 550 F.2d 1196 (9th Cir. 1977).

[51] *Ortiz*, 595 F.2d at 73. The court noted the diversity statute had a history of strict interpretation; however, the FTCA had been liberally construed. *Id. Compare* Owen Equipment and Erection Co. v. Kroger, 427 U.S. 363, 373-74 (1978) (strict interpretation required complete diversity) *and* Zahn v. International Paper Co., 414 U.S. 291, 301 (1973) (in diversity class action each member of class must independently satisfy minimum jurisdictional amount) *with* United States v. Muniz, 374 U.S. 150, 165-66 (1963) (action by federal prisoners under FTCA for injuries sustained while in prison upheld) *and* Rayonier, Inc. v. United States, 352 U.S. 315, 318-20 (1957) (United States held liable for Forest Service negligence in fighting forest fire). The court concluded the FTCA did not preclude federal courts from asserting pendent party jurisdiction. *Ortiz*, 596 F.2d at 73.

[52] United Mine Workers v. Gibbs, 383 U.S. 715 (1966).

[53] *Ortiz*, 595 F.2d at 71. The court determined *Gibbs* provided the correct measure for determining if article III allowed the district court to hear the nonfederal claim. *Id.* The Court reasoned the *Gibbs* test must be satisfied for article III jurisdiction to exist. *Id.* The court had before it insufficient factual data to determine whether the federal claim and the state claim derived from a common nucleus of operative fact; thus, the court remanded the case for this determination. *Id.* at 71.

[54] 716 F.2d 755 (10th Cir. 1982), *cert. denied*, 469 U.S. 1018 (1984).

[55] *Stewart*, 716 F.2d at 758. The court noted the pendent party question impacted on both constitutional and statutory concepts of jurisdiction. *Id.* at 757.

and sought to join a state law tort claim against a fellow employee.[56] The court concluded that both the constitutional and statutory jurisdictional requirements were satisfied[57] and held that subject matter jurisdiction did exist for the state claim pendent to the FTCA claim.[58]

In the instant case, the United States Supreme Court assumed the constitutional criterion for pendent party jurisdiction was analogous to the constitutional criterion for pendent claim jurisdiction, and then proceeded to determine whether Congress precluded jurisdiction by statute.[59] The Court reasoned that federal courts are courts of limited jurisdiction set forth by Congress, and statutes construing jurisdiction should not be read broadly.[60] Additionally, the FTCA conferred jurisdiction over civil actions on claims "against the United States"[61] which

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[56] *Id.* at 756-57. Petitioner sought damages for personal injuries incurred in a parking lot accident at a nuclear weapons facility owned by the United States and operated by Rockwell International Corporation. *Id.* at 756. The injury allegedly occurred when petitioner was struck by a government vehicle driven by Gary Nuss, an employee of Rockwell while on security patrol. *Id.* The petitioner originally sought relief solely against the United States under the FTCA. *Id.* Petitioner later amended his complaint and named Rockwell and Nuss as defendants. *Id.* at 757. Petitioner claimed diversity jurisdiction against Rockwell and pendent party jurisdiction against Nuss. *Id.*

[57] *Id.* at 758. The court noted that both the constitutional hurdle and the statutory hurdle must be overcome before pendent party jurisdiction may be asserted. *Id.* at 757. The court applied the guidelines in United Mine Workers v. Gibbs, 383 U.S. 715 (1966) to determine the constitutional hurdle. *Stewart*, 716 F.2d at 757-58. The court was persuaded under these guidelines that subject matter jurisdiction of the state claim was pendent to the FTCA claim. *Id.* at 758-59. Additionally, the court found no congressional disapproval for the exercise of pendent party jurisdiction under the FTCA. *Id.* at 758.

[58] *Stewart*, 716 F.2d at 758-59. For an indication of how other circuits have dealt with the pendent party question since Aldinger v. Howard, 427 U.S. 1 (1976) see Hiram Walker & Sons, Inc. v. Kirk Line, 877 F.2d 1508, 1512 (11th Cir. 1989), which utilized the *Gibbs* test to grant pendent party jurisdiction; *see also* Feigler v. Tidex, Inc., 826 F.2d 1435, 1437-40 (5th Cir. 1987) (granted pendent party jurisdiction and criticized Ninth Circuit as last hold out refusing to recognize pendent party jurisdiction); Johnson v. Town of Elizabethtown, 800 F.2d 404, 407 (4th Cir. 1986) (stated additional requirement of prudential concerns).

[59] Finley v. United States, 109 S. Ct. 2003, 2006-07 (1989). The Court stated they would not assume Congress had granted full constitutional power to allow pendent parties as they did with pendent claims. *Id.* at 2007.

[60] *Id.* at 2007. Due regard for the rightful independence of state government required federal courts to confine their own jurisdictional limits exactly within those defined by the statute. *Id.* at 2008-09. The limited nature of federal jurisdiction was an old and established principle. *Id.* at 2005-06.

[61] 28 U.S.C. § 1346(b) (1982); *cf.* Owen Equipment & Erection Co. v. Kroger, 437 U.S. 365, 372 (1978) (strict statutory interpretation required complete diversity); Zahn v. International Paper Co., 414 U.S. 291, 301 (1973) (strict interpretation required all members of class to meet minimum jurisdictional amount).

the Court concluded meant against the United States and no one else.[62] The Court also found the instant case factually distinguishable from *United Mine Workers v. Gibbs*[63] in that *Finley* involved additional parties instead of additional claims.[64] Furthermore, the doctrine of ancillary jurisdiction did not apply because the relationship between the petitioner's added claims and the original complaint was mere factual similarity.[65] Finally, the Court noted the altered language[66] in the revision of the applicable statute was more likely stylistic in nature, and therefore did not infer Congress intended to change the effect of the law.[67]

In a dissenting opinion,[68] Justice Stevens concluded that in the

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[62] *Finley*, 109 S. Ct. at 2008. The Court concluded that a strict interpretation of the FTCA did not allow extension to parties other than the United States. *Id.*

[63] United Mine Workers v. Gibbs, 383 U.S. 715 (1966).

[64] *Finley*, 109 S. Ct. at 2006. In *Gibbs*, jurisdiction was extended to pendent claims. *Gibbs*, 383 U.S. at 725. The instant case involved obtaining pendent jurisdiction over parties for which there was no independent basis for federal jurisdiction. *Finley*, 109 S. Ct. at 2006. The Court considered this a most significant distinction. *Id.* at 2007-08.

[65] *Finley*, 109 S. Ct. at 2008. Neither the convenience of the litigants nor consideration of judicial economy sufficed to justify extension of the doctrine of ancillary jurisdiction. *Kroger*, 437 U.S. at 376-77 (1978).

[66] *Finley*, 109 S. Ct. at 2009. The Court noted that prior to the 1948 revision, the FTCA conferred upon federal courts exclusive jurisdiction to hear ". . . *any claim* against the United States." *Id.* at 2009 (quoting 28 U.S.C. § 931 (1946)) (emphasis added). Congress changed the language . . . in the 1948 . . . revision to confer exclusive jurisdiction over ". . . *civil actions* on claims against the United States." 28 U.S.C. § 1346(b) (1982)) (emphasis added).

[67] *Finley*, 109 S. Ct. at 2010. In addressing the issue of congressional intent behind the change in statutory language, the Court noted that the 1948 revision of the FTCA appeared soon after the adoption of the Federal Rules of Civil Procedure which provided, "[t]here shall be one form of action to be known as 'civil action'." *Id.* at 2009 (quoting FED. R. CIV. P. 2). The Court determined that the 1948 revision employed the expression "civil action" throughout those provisions which governed the jurisdiction of the district courts in order to be consistent with the new terminology in the Federal Rules of Civil Procedure. *Id.* at 2009.

The Court found it inconceivable that Congress intended such a broad expansion of federal jurisdiction by such a minor and obscure change of wording. *Id.* at 2010. The Court referred to established judicial canons of statutory interpretation, which required Congress to clearly express its intention to change the effect of a law through revision. *Id.* at 2009 (citing Anderson v. Pacific Coast S.S. Co., 225 U.S. 187, 199 (1912)). The Court concluded no changes in law or policy were presumed from slight changes in the language of the FTCA as a result of revision, absent express intent. *Id.*

[68] *Id.* at 2011. Justice Stevens wrote a dissenting opinion in which Justices Brennan and Marshall joined. *Id.* Justice Blackmun filed a separate dissenting opinion. *Id.* at 2010. Justice Blackmun concluded since there was no evidence of congressional intent to exclude the pendent party from federal jurisdiction; the sensible result was to allow the pendent party into federal court. *Id.* at 2011.

absence of express or implied congressional disapproval and in order to be faithful to precedent, the Court should adopt a rule assuming the existence of pendent jurisdiction.[69] Since the FTCA did not expressly or impliedly forbid the exercise of pendent jurisdiction, the *Gibbs* test should apply in order to remain faithful to precedent.[70] Justice Stevens reasoned that the dispute between all parties was derived from a common nucleus of operative facts which allowed an ample basis for petitioners to assert additional claims against nonfederal defendants.[71] Furthermore, it was perfectly clear that the joinder of two private defendants did not defeat the district court's constitutional and statutory power to decide the federal issue.[72] Additionally, Justice Stevens noted the overwhelming consensus of the lower court federal judges was that pendent party jurisdiction was an acceptable extension of *Gibbs*, and therefore the Court incorrectly ignored the lower courts' accumulated wisdom.[73] Finally, Justice Stevens noted that pendent jurisdiction rested on ideals of judicial economy and equitable relief, and that the Court was unnecessarily grudging in their analysis.[74]

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[69] *Id.* at 2017-18. Justice Stevens noted exclusive jurisdiction over claims arising under the FTCA made circumstances about as powerful as can be imagined for the exercise of pendent party jurisdiction. *Id.* at 2017. Justice Stevens interpreted dicta in Aldinger v. Howard, 427 U.S. 1 (1976) as suggesting the availability of pendent party jurisdiction under the FTCA for precisely this reason. *Finley*, 109 S. Ct. at 2017 (citing Aldinger v. Howard, 427 U.S. 1, 18 (1976)).

[70] *Finley*, 109 S. Ct. at 2015-18. Justice Stevens cited numerous lower court decisions which applied the *Gibbs* test to pendent party jurisdiction. *Id.* at 2015-17.

[71] *Id.* at 2013 (citing FED. R. CIV. P. 14(1)). Justice Stevens noted also that Rule 14(a) was applicable to FTCA cases. *Id.* However, the Federal Rules for Civil Procedure expressly provided that the rules shall not be construed to extend the jurisdiction of the district courts. FED. R. CIV. P. 82.

[72] *Finley*, 109 S. Ct. at 2013 (citing FED. R. CIV. P. 20(a)). "If the claim against nonfederal defendants was properly brought in a federal court, those defendants could require the United States to defend their claim for contribution in that action." *Id.* at 2013.

[73] *Id.* at 2011. After *Gibbs* was decided, federal judges began to apply the same reasoning to add additional parties onto a pendent nonfederal claim. *Id.* at 2015; *see* Leather's Best, Inc. v. S.S. Mormaclynx, 451 F.2d 800, 811 (2d Cir. 1971) (state tort claim deemed pendent to admiralty claim); Astro-Honor, Inc. v. Grosset & Dunlap, Inc., 441 F.2d 627, 629 (2d Cir. 1971) (granted pendent party jurisdiction under 28 U.S.C. § 1338(b)).

[74] *Finley*, 109 S. Ct. at 2021. Justice Stevens stated that the majority decision was extremely unfair. *Id.* The key purpose behind the principle of pendent party jurisdiction is to prevent a litigant from trying his case in two forums. *Id.* at 2021. Due to exclusive federal jurisdiction, only in federal court could all the claims be tried together. *Id.* Forcing a federal plaintiff to litigate in both federal and state court impaired the ability of the federal court to grant full relief. *Id.* at 2021.

The issue of pendent party jurisdiction balances like a huge scale with two giant weights on each end.[75] On the right is the doctrine that federal courts are courts of limited jurisdiction preserving the states' sovereign independence.[76] On the left is judicial economy and the equitable doctrine of complete relief in a single action.[77] The decision in the instant case forces the plaintiff to litigate her claims in separate forums.[78] The problems and expenses of litigating in multiple forums are immense.[79] Additionally, litigating in both forums impairs the federal court's ability to grant full relief.[80] In the alternative, where a plaintiff has the option of consolidating her claims in state court, there exists a fundamental bias against utilization of the federal forum.[81] Despite the principles of equity involved, the most transcending principle of federal jurisdiction is that federal courts are courts of limited jurisdiction.[82] Federal courts must limit themselves to jurisdiction where the United States Constitution permits and where Congress has specifically granted the authority to act.[83]

The United States Supreme Court has consistently chosen a rigid interpretation of jurisdictional statutes and delivered narrow decisions closely tied to their facts;[84] nonetheless, the Court also carved out an exception.[85] Extending the *Gibbs* exception to pendent parties is not beyond the reach of logic, as so many great minds have already concluded,[86] but somewhere short of granting the federal courts general jurisdiction a line must be drawn.[87] Tremendous uncertainty surrounds the doctrine of pendent party jurisdiction as a result of the Supreme Court's dogmatic refusal to directly confront the constitutional issue.[88] Different circuits have reached different results and on occasion have even utilized different standards.[89] By refusing to extend pendent party jurisdiction under the FTCA, the Court once again avoided the

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[75] *See supra* notes 9-10, 29, 34-36, 43, 58-59, 69 and accompanying text.
[76] *See supra* notes 9-10, 43 and accompanying text.
[77] *See supra* notes 29, 54, 58-59, 74 and accompanying text.
[78] *See supra* notes 1-2, 64-65, 70, 74 and accompanying text.
[79] *See supra* notes 72-74 and accompanying text.
[80] *Id.*
[81] *Id.*
[82] *See supra* notes 9-10, 43, 61 and accompanying text.
[83] *Id.*
[84] *See supra* notes 14, 16, 18, 32, 34 and accompanying text.
[85] *See supra* notes 23-27 and accompanying text.
[86] *See supra* notes 29, 54, 58-59, 73 and accompanying text.
[87] *See supra* notes 9-10 and accompanying text.
[88] *See supra* notes 29-30, 32, 34 and accompanying text.
[89] *See supra* notes 29, 37, 41, 43, 53-54, 58-59 and accompanying text.

constitutional issue and held only that jurisdiction was precluded by Congress.[90] The holding in *Finley* is narrow; however, the implications are far reaching. Without issuing a broad sweeping ban on pendent party jurisdiction, the Court in *Finley* considered a set of facts which could not have been more ideal for extending pendent party jurisdiction and then declined to do so.[91] Consequently, where a future petitioner can overcome the seemingly insurmountable obstacle of statutory preclusion under any particular statute, the question of constitutional permissibility for pendent party jurisdiction still looms unanswered.[92]

James T. McColgan

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[90] *See supra* notes 60, 64, 66-68 and accompanying text.
[91] *See supra* notes 1-2, 5, 33, 64, 69-70 and accompanying text.
[92] *See supra* notes 60, 66-68 and accompanying text.

Pro Bono — Court Appointed Counsel — Federal Courts May Request, Not Compel, Counsel to Serve in In Forma Pauperis Civil Cases Under 28 U.S.C. § 1915(d) (1982)

Petitioner[1] sought a writ of mandamus[2] to compel respondent district court[3] to grant his motion to withdraw[4] as appointed counsel[5] for indigent prisoners in a civil rights action.[6] Petitioner alleged that under section 1915(d) of title 28 of the United States Code,[7] courts may "request" that an attorney represent indigent litigants in civil cases, but they may not force such representation if the attorney is unwilling.[8] A magistrate denied petitioner's motion to withdraw.[9] On appeal,[10] the district court upheld this denial by ruling, inter alia,[11] that the statute

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[1] Petitioner, attorney John E. Mallard, was admitted to practice before the district court in January, 1987. Mallard v. United States Dist. Court, 109 S. Ct. 1814, 1817 (1989). In June, 1987, the district court appointed petitioner as counsel in an in forma pauperis proceeding. *Id.*

[2] *Id.* Petitioner sought the writ of mandamus from the court of appeals because he had no alternative remedy. *Id.* at 1817, 1822.

[3] *Id.* at 1816. Respondent was the United States District Court for the Southern District of Iowa. *Id.*

[4] *Id.* at 1817. After reviewing the case, petitioner sought to withdraw, stating that his lack of experience both with the legal issues involved and with litigation practices rendered him inadequate to represent these clients. *Id.* He volunteered to help indigent clients in proceedings involving bankruptcy or securities law, his areas of expertise. *Id.*

[5] *Id.* In compliance with an order of the Eighth Circuit, the district court drew up a list of attorneys in its district available to represent indigent clients. *Id.* at 1816. The Volunteer Lawyers Project (VLP) kept this list and selected attorneys randomly when an in forma pauperis proceeding necessitated appointment of counsel. *Id.* The VLP selected petitioner's name from this list. *Id.* at 1817.

[6] *Id.* The prisoners filed suit against various prison officials under 42 U.S.C. § 1983, alleging civil rights violations. *Id.*

[7] *Id.* at 1816. Section 1915(d) provided: "The court may request an attorney to represent any such person [claiming in forma pauperis status] unable to employ counsel and may dismiss the case if the allegation of poverty is untrue, or if satisfied that the action is frivolous or malicious." 28 U.S.C. § 1915(d) (1982).

[8] *See supra* note 4.

[9] *Mallard*, 109 S. Ct. at 1817.

[10] *Id.* In addition to restating his arguments to the magistrate, petitioner contended that he was not comfortable as a litigator, and that to compel him to represent these clients when he felt incompetent to do so would violate ethical standards. *Id.*

[11] *Id.* Based on the level of expertise reflected by petitioner's brief in support of his motion to withdraw, the district court found him competent to represent the prison inmates. *Id.*

made the appointment compulsory.[12] The United States Court of Appeals for the Eighth Circuit denied the subsequent petition for a writ of mandamus to force the district court to allow petitioner to withdraw.[13] On writ of certiorari,[14] the United States Supreme Court, *held*, reversed and remanded.[15] Where section 1915(d) empowers the courts to "request" an attorney to represent an indigent client in a civil case, that statute does not empower the courts to "compel" an attorney to represent an indigent client. *Mallard v. United States District Court*, 109 S. Ct. 1814, 1817 (1989).

The notion that a poor person who desires access to the courts should be heard, whether or not he can afford the services of an attorney, found expression in English common law over seven hundred years ago as part of the Magna Carta.[16] Statutory authority for court appointed counsel in in forma pauperis proceedings first appeared in 1495.[17] This tradition of appointed counsel for the poor extended primarily to criminal defendants in colonial America.[18] It was not until after the Civil War, however, that the great need for aid to civil litigants became apparent.[19]

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[12] *Id.* The district court held that § 1915(d) did authorize compulsory appointments of counsel. *Id.*

[13] *Id.* The Eighth Circuit denied the petition without an opinion. *Id.*

[14] *Id.* The United States Supreme Court granted certiorari in order to resolve the conflict among the circuits as to whether such appointments of counsel in civil cases were compulsory. *Id.*

[15] *Id.* at 1823. Justice Brennan delivered the majority opinion, in which Chief Justice Rehnquist, Justice White, Justice Scalia, and Justice Kennedy joined. *Id.* at 1816. The Court emphasized in its holding that it only interpreted § 1915(d) as not empowering federal courts to coerce unwilling appointed counsel to represent indigent clients. *Id.* at 1823. The Court noted that it did not address the issue of whether the federal courts have such inherent power. *Id.*

[16] Maguire, *Poverty and Civil Litigation*, 36 HARV. L. REV. 361, 364 (1923). The Magna Carta stated, "To no one will we sell, to no one will we refuse or delay, right or justice." MAGNA CARTA ch. 40; *see* 2 W. HOLDSWORTH, A HISTORY OF ENGLISH LAW 491 n.3 (3d ed. 1923) (counsel requested for poor plaintiffs in 1292).

[17] Maguire, *supra* note 16, at 373. The statute stated in part: "Justices shall appoynte attorney and attorneies for the same pouer persone and persones and all other officers requisite and necessarie to be hadde for the spede of the seid duties without any rewards for their Councelles help . . . ." *Id.* (quoting 11 Hen. VII, c. 12(1495)). This statute remained in force until 1883 when court rules replaced it. Shapiro, *The Enigma of the Lawyer's Duty to Serve*, 55 N.Y.U. L. REV. 735, 741 n.24 (1980).

[18] W. BEANEY, THE RIGHT TO COUNSEL IN AMERICAN COURTS 16-17 (1955). Connecticut, Delaware, Pennsylvania, Rhode Island, South Carolina, and Virginia all had acts providing counsel, if requested, to the accused in criminal cases. *Id.*

[19] Maguire, *supra* note 16, at 381-82. Maguire suggested that before the Civil War, there was generally high wealth and low court costs. *Id.* at 382. Maguire also noted that

Congress responded to this need in 1892 by enacting section 1915(d) to enable indigents to secure counsel in civil federal court cases.[20] The House Report was silent as to the reason for the choice of the word "request" in section 1915(d).[21] In the House floor debates, however, reference was made to "compelling" attorneys to serve when asked by the court.[22] Thus, the starting point in construing section 1915(d) must be the specific language of that statute.[23]

The United States Court of Appeals for the Sixth Circuit first addressed the problem of the interpretation of the language of section 1915(d) in the context of a civil case in *Reid v. Charney*.[24] In *Reid*, the United States District Court for the Eastern District of Michigan, Northern Division, granted plaintiff-prisoner permission to proceed in forma pauperis in a civil rights action.[25] Both plaintiff-prisoner Reid, and the district court tried unsuccessfully to find willing counsel to represent him.[26] In dicta, the Sixth Circuit expressed regret that willing

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after the Civil War, the growth of urban areas spawned more litigation. *Id.*

[20] *See supra* note 7.

[21] H.R. REP. No. 1079, 52d Cong., 1st Sess. 1-2 (1892). The House Report spoke only of suits involving property and the desirability of allowing the poor to litigate their claims. *Id.*

[22] 23 CONG. REC. 5199, 5199 (1892). The following exchange took place in the United States House of Representatives:

> Mr. William A. Stone: In a case where the plaintiff is wholly unable to pay the costs where there is a judgment against him for the costs, how do the officers get their pay?
>
> Mr. Culberson: They do not get any in that event.
>
> Mr. William A. Stone: Then you are simply compelling the officers to do that work for nothing.

Id. Early cases tried soon after the passage of § 1915(d) used the verbs "assign" or "appoint" rather than the "request" language of the statute itself, even when referring to the statute. *E.g.*, St. Louis & S.F. Ry. v. Farr, 56 F. 994, 997 (8th Cir. 1893) (stated that "the court shall appoint his attorney"); Brinkley v. Louisville & N.R. Co., 95 F. 345, 353 (C.C.W.D. Tenn. 1899) (referred to statute as saying court "may assign"); Whelan v. Manhattan Ry., 86 F. 219, 221 (C.C.S.D.N.Y. 1898) ("he will be assigned to represent plaintiff").

[23] Blue Chip Stamps v. Manor Drug Stores, 421 U.S. 723, 756 (1975) (Powell, J., concurring). Justice Powell stated that the interpretation of a statute must start with the language of the statute. *Id.*; *see* United States v. Ron Pair Enters., 109 S. Ct. 1026, 1030 (1989) ("plain meaning of legislation should be conclusive").

[24] 235 F.2d 47 (6th Cir. 1956) (per curiam).

[25] *Reid*, 235 F.2d at 47. The district court first dismissed plaintiff's complaint because of his lack of ability to proceed with the trial. *Id.*

[26] *Id.* The opinion stated that Reid made "repeated efforts" to find an attorney. *Id.* The district court allowed him a continuance of two months to seek counsel, but his efforts proved fruitless. *Id.* After this time expired, the district court dismissed the case but stated that if Reid could obtain counsel within 30 days, the case could be reopened.

counsel could not be secured.[27] The *Reid* court contrasted the authority to "assign" counsel in criminal cases with the authority to "request" counsel in civil cases.[28] The Sixth Circuit concluded that in civil cases, the statutory power only extended to "requesting" an attorney to represent an indigent client.[29]

Amplifying the *Reid* holding, the United States District Court for the District of Nebraska in *Rhodes v. Houston*[30] held that this statutory power to request counsel in civil cases was not mandatory, but permissive.[31] The *Rhodes* court emphasized the permissive language of section 1915(d) and stated that the significant word in its construction was "may."[32] Therefore, the *Rhodes* court reasoned, it was within the

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Id.

[27] *Id.*; *see* Branch v. Cole, 686 F.2d 264, 266 (5th Cir. 1982) (expressed hope that inability to find counsel was rare). *But see* Ray v. Robinson, 640 F.2d 474, 478-79 (3d Cir. 1981) (many willing volunteer attorneys existed); Scott v. Plante, 532 F.2d 939, 950 (3d Cir. 1976) (extensive network of volunteers existed). *See generally* Postema, *Moral Responsibility in Professional Ethics*, 55 N.Y.U. L. REV. 63, 84 (1980) (accepting representation of client was exercise of moral judgment); Simon, *Ethical Discretion in Lawyering*, 101 HARV. L. REV. 1083, 1083 (1988) (refusal to accept cases should be discretionary).

[28] *Reid*, 235 F.2d at 47. Section 3006A, enacted in 1964, assured the right of representation by counsel in a criminal case. 18 U.S.C. § 3006A (1988). The language of this statute differs dramatically from that of § 1915(d) in its use of phrases such as "shall be selected" and "will be appointed" in reference to court appointments of counsel. *Id.* Appointments under § 3006A for federal criminal defendants are beyond the scope of this casenote since these appointments implicate considerations not at issue in civil cases, such as the sixth amendment right to effective assistance of counsel. *Id.*; *see* Gideon v. Wainwright, 372 U.S. 335, 342-44 (1963) (established right to counsel at certain stages during criminal proceedings); *see also* United States v. Accetturo, 842 F.2d 1408, 1414-15 (3d Cir. 1988) (forced attorney to take criminal case). For an in-depth study that analyzed the problems engendered by appointments in criminal cases in one metropolitan area, and the response by legal aid organizations, see McConville & Mirsky, *Criminal Defense of the Poor in New York City*, 15 N.Y.U. REV. L. & SOC. CHANGE 581 *passim* (1986-87).

[29] *Reid*, 235 F.2d at 47; *see* Gray v. Wisconsin Dep't of Health & Social Servs., 495 F. Supp. 321, 322 (E.D. Wis. 1980) (court had no authority to "appoint"); Spears v. United States, 266 F. Supp. 22, 25 (S.D.W. Va. 1967) (court's power limited to "requesting"); Wagner v. Maroney, 263 F. Supp. 377, 378 (W.D. Pa. 1967) (court had statutory power only to "request").

[30] 258 F. Supp. 546 (D. Neb. 1966), *aff'd*, 418 F.2d 1309 (8th Cir. 1969), *cert. denied*, 397 U.S. 1049 (1970).

[31] *Rhodes*, 258 F. Supp. at 579. The court remarked on the differences in phrasing that distinguished § 1915(d) from statutes authorizing "appointment" of counsel in criminal proceedings. *Id.*

[32] *Id.* The *Rhodes* court noted that it was this permissive language that allowed an attorney to decline a request by the court in a civil case. *Id.* Plaintiff in *Rhodes* filed numerous pro se motions and stated that all Nebraska attorneys opposed him. *Id.* at 576.

discretion of the court whether to request counsel.[33] Emphasizing that an attorney could refuse the request of the court in a civil case, the *Rhodes* court concluded that plaintiff's motion did not warrant such a request.[34] Likewise, the United States Court of Appeals for the Eighth Circuit held that no absolute right to counsel in civil cases existed in *Peterson v. Nadler*.[35] The court pronounced that although no such right to counsel existed, the courts did have the discretionary power to make such "appointments."[36]

The United States Court of Appeals for the Seventh Circuit expanded this discretionary view of the power of the courts to request counsel in *Caruth v. Pinkney*.[37] In *Caruth*, plaintiff-prisoner commenced a pro se civil rights action,[38] and the court determined that the decision of whether to "appoint" an attorney for an indigent in a civil proceeding should be guided by the weighing of "certain factors."[39] The court identified the factors as: (1) the legal issues of the case and the ability of the litigant to discern these issues; (2) the facts of the case, and whether they are in dispute; (3) the ability of the litigant to investigate the facts of his case; and (4) the substantive value of the claim.[40] Utilizing these factors, the court then decided whether a re-

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In his motion for appointment of counsel, plaintiff insisted on an attorney from another state. *Id.*

[33] *Id.* at 579; *see* Ehrlich v. Van Epps, 428 F.2d 363, 364 (7th Cir. 1970) (per curiam) (court not required to request counsel in civil case); Sierra v. Lehigh County, 617 F. Supp. 427, 429 (E.D. Pa. 1985) (court had discretion in requesting counsel in civil case); United States v. Decker, 344 F. Supp. 519, 520 (W.D. Ky. 1972) (power to "request" is discretionary); *see also* Fisch, *Coercive Appointments of Counsel in Civil Cases In Forma Pauperis: An Easy Case Makes Hard Law*, 50 Mo. L. Rev. 527, 542 (1985) (no obligation of court to provide counsel for indigent civil litigants).

[34] *Rhodes*, 258 F. Supp. at 579-80. The district court found the request for an attorney from another state "intolerable." *Id.* at 581. In spite of plaintiff's arguments, the court adamantly refused to go beyond the statutory limitations in "appointing," rather than "requesting" counsel for plaintiff. *Id.*

[35] 452 F.2d 754, 757 (8th Cir. 1971); *see* Lassiter v. Department of Social Servs., 452 U.S. 18, 24-25 (1981) (no right to counsel in parental status termination proceeding); Johnson v. Avery, 393 U.S. 483, 488 (1969) (no obligation of court to provide counsel for indigent prisoners).

[36] *Peterson*, 452 F.2d at 757. The court pointed out that it was within the discretion of the court to decide if the particular circumstances of the case justified an "appointment" of an attorney. *Id.*

[37] 683 F.2d 1044, 1048-49 (7th Cir. 1982), *cert denied*, 459 U.S. 1214 (1983).

[38] *Caruth*, 683 F.2d at 1046. Plaintiff complained that prison authorities took away his job as law clerk in the prison library without justification. *Id.* at 1047.

[39] *Id.* at 1048. The court noted that these factors varied with the circumstances of each case. *Id.*

[40] *Id.*; *see* Bounds v. Smith, 430 U.S. 817, 826-27 (1977) (lack of facilities for re-

quest for counsel was appropriate in that particular case.[41] The *Caruth* court determined that plaintiff's claim did not justify a request for counsel.[42]

The United States Court of Appeals for the Fourth Circuit also struggled with the interpretation of the meaning of the word "request" in section 1915(d) in *Whisenant v. Yuam*.[43] Whisenant, a plaintiff-prisoner who alleged that prison officials denied him adequate medical care, sought an appointment of counsel,[44] and the United States District Court for the Western District of North Carolina denied his request.[45] On appeal, the Fourth Circuit construed the word "request" as synonymous with "appoint" and directed the district court to appoint counsel to represent Whisenant.[46] The Fourth Circuit, however, agreed that this appointment was within the discretion of the court.[47] The

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search justified order to provide law library for pro se prisoners); Maclin v. Freake, 650 F.2d 888-89 (7th Cir. 1981) (handicapped prisoner found unable to proceed pro se); Gordon v. Leeke, 574 F.2d 1147, 1152-53 (4th Cir.) (lack of ability to investigate facts justified "appointment" of counsel), *cert. denied*, 439 U.S. 970 (1978); Bunton v. Englemyre, 577 F. Supp. 1, 5 (E.D. Tenn. 1981) (since prisoner tried unsuccessfully to engage counsel, then court was justified in "requesting" counsel). *But see* Quail v. Municipal Court, 171 Cal. App. 3d 572, 579, 217 Cal. Rptr. 361, 365 (1985) (Johnson, J., concurring and dissenting) (indigents had right to counsel in civil cases under state common law since 1850). *See generally* Gallagher, *Civil Gideon?*, A.B.A. J. Sept. 1989, at 16 (low-income tenants argued for right to counsel in eviction proceedings).

[41] *Caruth*, 683 F.2d at 1048. The court also noted that the fact that an attorney received no compensation for his services should not influence the decision as to whether a request was appropriate. *Id.* at 1049. The court further remarked that it could only "request" the services of an attorney, not "require" them. *Id.*

[42] *Id.* at 1050. In reviewing Caruth's request for an appointment of counsel, the Seventh Circuit determined that because the facts and issues were not complex or in controversy, a request for counsel was not appropriate. *Id.* The court found Caruth competent to proceed pro se, and noted that his position as a law clerk in the prison library probably made him better informed than most pro se petitioners concerning the workings of the "judicial process." *Id.*

[43] 739 F.2d 160 (4th Cir. 1984).

[44] *Whisenant*, 739 F.2d at 163. The facts revealed that Whisenant was bleeding both orally and rectally at 4:25 a.m. on July 8. *Id.* However, he did not receive adequate medical attention until 9:55 p.m. that same day. *Id.*

[45] *Id.* at 163-64. In reaching its decision to request counsel for Whisenant, the court considered the facts that he was practically illiterate, that he was unable to leave prison to investigate the facts of his claim, and that there were conflicting versions of his treatment at the prison. *Id.* at 163. The combination of these factors convinced the court that a request for counsel was appropriate under these circumstances. *Id.* at 164.

[46] *Id.* at 163 n.3. The court made no mention of the inconsistencies in the interpretations of the word. *Id.*

[47] *Id.* at 163. The Fourth Circuit pointed out that a request for counsel should be granted in a case of "exceptional circumstances." *Id.* The *Whisenant* court found this

court further stated that although the power to request an attorney was discretionary, members of the bar have a duty to serve as counsel for indigent plaintiffs.[48] The Supreme Court has affirmed the principle that an attorney had a duty to serve the court.[49] This idea of an ethical obligation imposed on attorneys to serve the court had much support.[50] Thus, a lawyer faced with a "request" by the court to serve as appointed counsel under section 1915(d) had two considerations: (1) whether the language of section 1915(d) required him to accept the appointment; and (2) whether he was ethically obligated to accept it.[51]

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case presented "exceptional circumstances." *Id.*

[48] *Id.* The Fourth Circuit did not elaborate on this ethical duty of attorneys to accept court appointments. *Id.* However, many circuits have commented on this ethical obligation of attorneys. *See In re* Pritzker, 762 F.2d 532, 533 (7th Cir. 1985) (appointed attorney had responsibility to comply with court rules); Bradshaw v. United States Dist. Court, 742 F.2d 515, 518-19 (9th Cir. 1984) (after over 20 attorneys refused to help litigious plaintiff, court stated that failure to assist indigents indicated lack of professionalism); Family Div. Trial Lawyers v. Moultrie, 725 F.2d 695, 705 (D.C. Cir. 1984) (pro bono practice was traditional in practice of law); Branch v. Cole, 686 F.2d 264, 266-67 (5th Cir. 1982) (ethical duty required attorneys to take appointments in civil rights actions by indigents); Tyler v. Lark, 472 F.2d 1077, 1079 (8th Cir.) (representation of indigents was traditional obligation as member of bar), *cert. denied*, 414 U.S. 864 (1973); United States v. Dillon, 346 F.2d 633, 635 (9th Cir. 1965) (representation of indigents was condition of admission to bar), *cert. denied*, 382 U.S. 978 (1966). *But see* Heidelberg v. Hammer, 577 F.2d 429, 431 (7th Cir. 1978) (reluctance to impose burden of free representation on attorney in civil case).

[49] Powell v. Alabama, 287 U.S. 45, 73 (1932). The majority stated: "Attorneys are officers of the court, and are bound to render service when required by such an appointment." *Id.* Although *Powell* was a criminal case, this concept of a duty to the court on the part of members of the bar was not limited to the criminal context. *Id.*

[50] *See* Maguire, *supra* note 16, at 373 (quoting statute from 1495). The concept of an obligation or a duty owed by a member of the bar to serve the poor when called upon by the court was an ancient tradition. *Id.* Many countries had some form of statutory entitlement to representation by counsel in civil cases. Quail v. Municipal Court, 171 Cal. App. 3d 572, 585-86, 217 Cal. Rptr. 361, 370 (1985) (Johnson, J., concurring and dissenting). Justice Johnson noted that indigents in England had this right since 1495, in France since 1851, in Germany since 1871, in Sweden since 1919, and in Italy since 1923. *Id.* at 586, 217 Cal. Rptr. at 370. In the United States, the American Bar Association proposed that its members "should" render more public service. Shapiro, *supra* note 17, at 737. However, this proposal was never adopted. *Id.* at 737 n.8. Professor Shapiro also commented, "Responsibility implies an element of choice, of freedom not only to choose membership in the profession but to chart one's course after membership is attained." *Id.* at 788. *See generally* Faulkner, *Mandatory Pro Bono*, A.B.A. J. Oct. 1989, at 52, 53 (New York bar proposes its members serve at least 20 pro bono hours per year).

[51] *See* Freedman, *Personal Responsibility in a Professional System*, 27 CATH. U.L. REV. 191, 204-05 (1978) (decency requires taking case); Fried, *The Lawyer as Friend: The Moral Foundations of the Lawyer-Client Relation*, 85 YALE L.J. 1060, 1078 (1976) (moral decision whether to accept or decline clients). *But see* Comment, *The Ohio Su-*

The United States Court of Appeals for the Ninth Circuit addressed both the interpretational and ethical problems raised by section 1915(d) in *United States v. 30.64 Acres of Land.*[52] In this case, the United States District Court for the Eastern District of Washington denied plaintiff, the owner of land taken by the government, his motion for appointment of counsel.[53] The appellate court overruled the district court and sought to explain several of the factors contributing to the confusion in construing section 1915(d).[54] The court acknowledged that the varying interpretations of the word "request" were the source of the confusion.[55] The Ninth Circuit reasoned that one explanation for these inconsistent interpretations was that federal courts received fewer motions for section 1915(d) "requests" than for mandatory "appointments."[56] In contrast to these frequently used motions, a section 1915(d) motion for a request for counsel was relatively rare.[57] The Ninth Circuit also pointed out that this "appointment" language often meant only that there was an attorney of record who volunteered his services to a client proceeding in forma pauperis.[58] The

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preme Court's Move Toward Quality Control of Court-Appointed Counsel for Indigent Defendants Charged With Capital Offense Crimes, 21 AKRON L. REV. 503, 505 (1988) (authored by George J. Ticoras) (court should only appoint experienced lawyers); Comment, *The Uncompensated Appointed Counsel System: A Constitutional and Social Transgression*, 60 KY. L.J. 710, 721 (1972) (authored by Bill Deatherage) (resentment of forced appointment may adversely affect quality of legal representation).

[52] 795 F.2d 796 (9th Cir. 1986).

[53] *30.764 Acres of Land*, 795 F.2d at 797-98. Plaintiff appeared pro se at his first trial and the jury awarded him compensation for his land. *Id.* at 797. The Ninth Circuit overturned the award and remanded the case for a new trial. *Id.* Before the new trial, plaintiff asked for an appointment of counsel, stating that he was mentally and physically disabled. *Id.* at 797-98. The district court denied this motion, and after judgment was entered, plaintiff appealed to the circuit court. *Id.* at 798.

[54] *Id.* at 798-99.

[55] *Id.* at 799. The court pointed out that some courts construed the word "request" to mean that they could not compel a lawyer to represent an indigent client in a civil case. *Id.* at 798-99; *see, e.g.*, Heidelberg v. Hammer, 577 F.2d 429, 431 (7th Cir. 1978) (power only to "request"); Gray v. Wisconsin Dep't of Health & Social Servs., 495 F. Supp. 321, 322 (E.D. Wis. 1980) (authority only to "request"). Other courts used the words "request" and "appoint" synonymously. *30.64 Acres of Land*, 795 F.2d at 799; *e.g.*, McKeever v. Israel, 689 F.2d 1315, 1323 (7th Cir. 1982) (Posner, J., dissenting) (power to " 'request' a lawyer - whatever exactly that means"); Maclin v. Freake, 650 F.2d 885, 887 (7th Cir. 1981) (used "appoint" in reference to statute).

[56] *30.64 Acres of Land*, 795 F.2d at 799. The court noted that many of these motions for appointment of counsel were for criminal proceedings. *Id.* at 799 n.5.

[57] *Id.* at 799 n.5. The court postulated that because of the rarity of this action, courts used the language of "appointment" out of force of habit. *Id.* at 799.

[58] *Id.* at 800. The court stated that the term "appointment" is used to identify a pro

court also recognized the duty incumbent on a lawyer to render public service but noted that most statutes that intended mandatory appointment also made some provision for compensation for the attorney and that section 1915(d) had no such provision.[59] The Ninth Circuit posited that the "heart of the issue" was the word "request" in section 1915(d).[60] The confusion apparent in the circuit and district courts resulted, the court said, from the interchangeable use of the word "request" with the words "assign" or "appoint."[61] Finally, the Court of Appeals for the Ninth Circuit concluded that it could hardly penalize the pro se petitioner for using the word "appointment" incorrectly in his motion when courts and attorneys both used it inappropriately.[62]

In the instant case, the United States Supreme Court found that since Congress used the phrase "shall appoint" in section 1915(c) and the different word "request" in section 1915(d), then the choice of the word "request" was deliberate.[63] The Court noted that when enacting section 1915(d), Congress was cognizant of at least twelve extant state statutes employing the words "assign" or "appoint."[64] Therefore, the *Mallard* Court reasoned, congressional intent in choosing the word "re-

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bono attorney as counsel of record for an indigent client. *Id.* Further, courts often knew of attorneys who were willing to serve indigent clients so that the actual appointment was a mere formality. *Id.*

[59] *Id.* at 801. The court also remarked that all these statutes used the words "assign" or "appoint," but never "request" as in § 1915(d). *Id.*

[60] *Id.* at 803. The court stated that at the time, the Supreme Court had not dealt with the interpretation of the word "request" in § 1915(d). *Id.* at 802 n.11.

[61] *Id.* at 799, 802; *see, e.g.*, Lewis v. Lane, 816 F.2d 1165, 1168 (7th Cir. 1987) (declined to define "request"); Ray v. Robinson, 640 F.2d 474, 477 (3d Cir. 1981) (stating § 1915(d) gave power to "appoint"); Garrison v. Lacey, 362 F.2d 798, 799 (10th Cir. 1966) (per curiam) (stating § 1915(d) authorized "appointment"), *cert. denied*, 387 U.S. 911 (1967); Irby v. Winans, 604 F. Supp. 484, 488 (E.D. Wis. 1985) (court could "appoint" under § 1915(d)); *see also* McKeever v. Israel, 689 F.2d 1315, 1319 (7th Cir. 1982) (distinction between "request" and "appoint" is irrelevant). *But see* Bunton v. Englemyre, 557 F. Supp. 1, 4 (E.D. Tenn. 1981) (court had power only to "request"); Ferguson v. Fleck, 480 F. Supp. 219, 222 (W.D. Mo. 1979) (not authorized to "appoint," only to "request").

[62] *30.64 Acres of Land*, 795 F.2d at 804 n.17. The court remanded the motion to the district court for a determination as to whether plaintiff was indigent and whether his particular case merited a request for counsel. *Id.* at 804.

[63] Mallard v. United States Dist. Court, 109 S. Ct. 1814, 1818 (1989). Justice Brennan, writing for the majority, stated that the deliberate use of the word "request" evidenced Congress' intent that these court appointments should not be mandatory. *Id.*

[64] *Id.* at 1819. Justice Brennan noted that Arkansas, Illinois, Indiana, Kentucky, Missouri, New Jersey, New York, North Carolina, Tennessee, Texas, Virginia, and West Virginia all had statutes using "appoint" or "assign" at the time of the enactment of § 1915(d) in 1892). *Id.*

quest" for section 1915(d) was to allow attorneys the option of declining.[65] Congress frequently enacted statutes explicitly calling for compulsory appointment of counsel, so in the Supreme Court's view, the "request" language of section 1915(d) indicated a non-compulsory congressional intent.[66] The Court explained that its holding only construed the language of section 1915(d) and thus did not define attorneys' ethical obligations to offer pro bono services to indigent clients.[67] The *Mallard* Court then determined that since section 1915(d) did not authorize federal courts to force assignments upon unwilling counsel in civil cases, petitioner could not be compelled to serve.[68] The Court also noted that a writ of mandamus was proper in the instant case, since the two reasons why the Court typically hesitated to issue a mandamus were absent.[69] The Supreme Court concluded that petitioner demonstrated that the district court exceeded the scope of its jurisdiction and that petitioner had no alternative means of relief; therefore, it was error for the court of appeals to deny his application for a writ of mandamus.[70]

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[65] *Id.* at 1821. Based on states' previous use of the relevant terms, Justice Brennan concluded that the word "request" should be given its "plain meaning." *Id.*

[66] *Id.* at 1820. The Supreme Court specifically noted 28 U.S.C. § 3005, which was enacted in 1790. *Id.* This statute used the word "assign" in reference to court-appointed counsel. *Id.* Therefore, Justice Brennan reasoned that Congress purposefully departed from its own previous vocabulary in selecting the word "request" for § 1915(d). *Id.* Justice Brennan also pointed out that the words "assign" or "appoint" connote compulsion, while "request" does not. *Id.* at 1819.

[67] *Id.* at 1822-23. The Court acknowledged the present growing need for pro bono services. *Id.* at 1823. Justice Brennan noted that a request to represent an indigent client presented the attorney with an ethical decision, but that the statute did not authorize any type of sanction should the attorney decline to accept the case. *Id.* at 1821. In a concurring opinion, Justice Kennedy restated the majority holding which confined itself to interpretation of the langauge of the statute. *Id.* at 1823 (Kennedy, J., concurring). He further recognized that the lawyer's ethical responsibility goes beyond the construction of this statute and that the lawyer must therefore carefully weigh his obligation to his profession against this interpretation. *Id.*

[68] *Id.* Justice Brennan recognized that court appointments of counsel were mandatory in criminal cases where the criminal defendant faced the death penalty. *Id.* at 1820-21. He also noted that this opinion did not deal with the constitutionality of such compulsory assignments. *Id.* at 1821 n.6.

[69] *Id.* at 1822. The Court pointed out its dislike of hearing applications in which a judge is a party and of trying one element of the case separate from the rest. *Id.*

[70] *Id.* The Court stated:

> The traditional use of the writ in aid of appellate jurisdiction both at common law and in the federal courts has been to confine an inferior court to a lawful exercise of its prescribed jurisdiction or to compel it to exercise its authority when it is its duty to do so.

In a dissenting opinion, Justice Stevens stated that the duty of the attorney to the court was of greater concern than the interpretation of any statute, and hence, petitioner's reasons for wishing to withdraw were unacceptable.[71] The Justice explained that since the district court had an established program of attorney appointments in civil cases, participation in that program was a condition precedent to petitioner's admission to the district court's bar.[72] Concluding that Congress intended section 1915(d) to provide indigent civil litigants with appointed counsel when necessary, Justice Stevens insisted that the drafters of section 1915(d) used the words "assign" and "request" synonymously.[73] Justice Stevens reasoned that section 1915(d) would be meaningless if courts could only request counsel, and that accordingly, the word "request" should be construed to mean "respectfully command."[74]

Almost one hundred years after its enactment, the Supreme Court has articulated the "plain meaning" of section 1915(d).[75] Hoping to lay to rest the confusion over the language of the statute, the Supreme Court has nevertheless presented additional problems for attorneys.[76] In construing the deceptively simple word "request" but not addressing the ethical considerations a request from the court would have, the Court has put the onus on the lawyer to decipher her role in appointments to in forma pauperis civil cases.[77] Although the attorney cannot

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Id. (quoting Roche v. Evaporated Milk Ass'n, 319 U.S. 21, 26 (1943)). The Court noted that petitioner met the requirement designed to ensure that the writ remain "an extraordinary remedy" by his proof that he had no other means of relief. *Id.*

[71] *Id.* at 1823 (Stevens, J., dissenting). Justice Marshall, Justice Blackmun, and Justice O'Connor joined Justice Stevens in his dissent. *Id.* Justice Stevens characterized petitioner's reason for wanting to withdraw as a wish to "do something else with his time." *Id.*

[72] *Id.* at 1826. Justice Stevens expressed his belief that for an attorney to withdraw from an appointment without a valid reason was completely contrary to the ethical tenets of the practice of law. *Id.* at 1823-24. He found no distinction between criminal and civil cases insofar as this ethical obligation was concerned. *Id.* However, some of the situations Justice Stevens pointed out in which it was proper to decline a case included: (1) having a conflict of interest; (2) being engaged in another trial; or (3) being unqualified for the appointment. *Id.* at 1823.

[73] *Id.* at 1825-26. Justice Stevens stated that congressional intent focused on providing these indigent civil litigants access to the courts and that he saw no significance in the choice of words used by the drafters of § 1915(d). *Id.* at 1825.

[74] *Id.* at 1826. Justice Stevens concluded by stating that he considered it "unthinkable" that a lawyer could decline a request of the Court without good reason. *Id.* at 1827.

[75] *See supra* notes 63-65 and accompanying text.

[76] *See supra* note 67 and accompanying text.

[77] *See supra* note 49 and accompanying text.

be compelled to serve against her wishes,[78] she must reconcile a host of other factors.[79] The attorney must consider, for instance, the implications her refusal to accept a case might have on public opinion of the legal profession in general.[80] She must also consider the ethical traditions of the practice of law in making her decision.[81] Perhaps most importantly, she must decide what duty, if any, she owes to the indigent civil litigant in need of her services and expertise.[82] By altruistically taking a case she may feel ill-equipped to litigate, the attorney may hinder, rather than help, those she seeks to aid.[83] Some guidance from local and national bar associations is needed now more than ever.[84] One of the long-term consequences of the Supreme Court's ruling may be an ever-shrinking pool of attorneys willing to take an in forma pauperis civil case.[85] Congress could eliminate this problem by enacting legislation which would provide the right to counsel for indigent plaintiffs in civil cases that merited appointment of counsel.[86] Until one of these answers is forthcoming, however, the attorney will have to search her own conscience when the court presents her with the dilemma of a "request."[87]

Nancy M. Maddox

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[78] *See supra* note 15.
[79] *See supra* note 72 and accompanying text.
[80] *See supra* note 27.
[81] *See supra* note 50 and accompanying text.
[82] *See supra* note 48 and accompanying text.
[83] *See supra* note 51.
[84] *See supra* note 50.
[85] *See supra* notes 33, 35 and 48.
[86] *See supra* notes 50 and 68.
[87] *See supra* notes 41, 49, 72 and 74.

BOOK REVIEWS

AN UNCERTAIN TRADITION: CONSTITUTIONALISM AND THE HISTORY OF THE SOUTH

Edited by Kermit L. Hall* and James W. Ely, Jr.**
Athens, GA: University of Georgia Press, 1989
Pp. ix, 403. Cloth, $40.00; paper, $18.00.

*Reviewed by William F. Winter****

This volume is a compilation of essays by a number of historians and constitutional scholars at a symposium on "The South and the American Constitutional Tradition" held at the University of Florida in 1987 as a part of the bicentennial observance of that year.

It is the intriguing recounting of how a region out of its special social and economic concerns attempted to create a political and legal structure in the early years of the republic that would best serve its sectional interests. Those efforts were particularly focused on achieving a Southern directed interpretation of the

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Constitution, in the drafting of which many of the South's leaders, especially the Virginians, had played so vital a part.

The principal message of this symposium derives from the events arising out of the two great constitutional watersheds of our nation's history. The first, of course, was the Civil War and the political dilemmas that preceded and followed it. The second, a century later, was the more civilized but nevertheless fiercely controversial struggle to remove the persistent vestiges of racial discrimination from our national escutcheon.

The title of the volume, *An Uncertain Tradition*, sets forth the difficulty of defining this journey. As Professor Herman Belz points out in his incisive overview of constitutional interpretation, there has never been a "single true constitutional tradition as a framework for analysis and standard of judgment" (p. 19). The fact of the matter is that the Constitution has been interpreted in vastly different ways with radically different results at various times in our history. As we have seen quite recently, much depends on who wins elections, and even though Supreme Court justices do not run for office, the presidents who appoint them and the senators who confirm them do.

Without mentioning the word, slavery was recognized by the framers of the Constitution as the South's "peculiar institution." Had it not been treated thus, there doubtless would have been no Constitution and no federal union in the first place.

It remained for the Virginian, John Marshall, to set in motion the legal dynamics that would ultimately prove the undoing of slavery. When the doctrine of implied powers was established in *McCulloch v. Maryland*[1] and the Supreme Court recognized itself as the ultimate arbiter of constitutional issues, the stage was set for the confrontation that would consume the South for the next forty years. Professor Kent Newmyer explained that it meant to the Southern conservatives: That it was a belated realization "that the Constitution of 1787 was a Trojan horse of radical social and economic transformation" (p. 115). Newmyer adds, "John Marshall spoke this truth with a special fire in 1819; in that anxious age the South listened and heard" (p. 115).

What it heard was a message that caused Southern legal

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[1] 17 U.S. (4 Wheat.) 316 (1819).

strategists to look for judicial help. They found it in a Court largely appointed by Andrew Jackson. The ultimate result was the *Dred Scott*[2] decision in 1857. That, perhaps, as much as any one event signalled the inevitable constitutional crisis that led to civil war. Given the changes that had taken place in an expanding nation that was fundamentally different from the one that had ratified the Constitution in 1787, that document was no longer susceptible of being interpreted in a way that put state and sectional values ahead of larger national interests.

As this series of essays points out, however, it would still take almost another hundred years to develop a constitutional view that gave full meaning to the equal protection clause of the fourteenth amendment. In fact, as Professor Les Benedict states in his presentation, in the last quarter of the Nineteenth Century and the first quarter of the Twentieth there was an actual retrenchment in the nation's commitment to the extension of civil rights to blacks and other minorities (pp. 234-35). The South and the rest of the country learned to live comfortably with *Plessy v. Ferguson*.[3]

It was not until the civic sensibilities of the nation were activated by the results of another war, this one being World War II, that a national mood developed out of which emerged the *Brown*[4] decision in 1954. This time there would be no going back. The collection of seventeen articles in this book also deals with the history of women's rights in the South and with the impact of judicial decisions, particularly those of the fourth circuit, on the economic development of the region. For the most part, though, the book is more about early constitutional issues than those that came later. This leaves a rather large gap in the treatment of the subject. Except for two chapters on the post-*Brown* era in Florida (p. 296-355), there is little in this series about the most important period of all in the still unfolding saga of the extension of equal rights to all Americans.

No presentation of the developments in constitutional law as they have affected the South over the last thirty-five years

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[2] 60 U.S. (19 How.) 393 (1857).

[3] 163 U.S. 537 (1896).

[4] Brown v. Board of Education, 347 U.S. 483 (1954).

can be complete without at least a mention of the "unlikely heroes," as Jack Bass characterizes the judges of the Fifth Circuit in his book of that title. What those latter day constitutionalists did to assert the rule of law and extend equal protection of the laws to everyone will be increasingly regarded as the most significant chapter in the legal history of our region. It is regrettable that at least one essay in this series was not devoted to their contributions.

Still this is a volume that provides provocative and interesting insights into the legal history of the South. It is fortunate, indeed, that so talented a group of historians and legal scholars could come together to produce what must be regarded as a highly valuable and scholarly work that enhances the understanding of us Southerners of our constitutional heritage.

EXPLAINING LAW AND ECONOMICS: A VIEW FROM THE TRENCHES

Law and Economics: A Comparative Approach To Theory and Practice

By: Robin Paul Malloy*
St. Paul, MN, West Publishing Co. 1990
Pp. xv, 166. $12.95.

*Reviewed by Gary Myers***

Almost one hundred years ago, Oliver Wendell Holmes predicted that economic principles would have a profound impact on the law: "For the rational study of the law the black letter man may be the man of the present, but the man of the future is the man of statistics and the master of economics."[1] Law and economics has become increasingly influential in recent years, not only in law schools and legislatures, but also in the courts.[2] Despite its growing importance and influence, law and econom-

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[1] O. Holmes, The Path of the Law (1897). Along similar lines, Louis Brandeis wrote that "[a] lawyer who has not studied economics . . . is very apt to become a public enemy." Brandeis, *The Living Law*, 10 Ill. L. Rev. 461, 470 (1916) (quoting Professor Hendeson).

[2] The influence of law and economics is not limited to courts with avowed "law and economics" judges. The Supreme Court of Mississippi, for instance, has explicitly cited economic concepts in a number of decisions. *See, e.g.*, Stuart's Inc. v. Brown, 543 So. 2d 649, 651-53 (Miss. 1989) (discussing workers' compensation); Comet Delta, Inc. v. Pate Stevedore Co., 521 So. 2d 857, 861-63 (Miss. 1988) (discussing Hand formula for negligence and Coase theorem); Galloway v. Travelers Ins. Co., 515 So. 2d 678, 684-87 (Miss. 1987) (Robertson, J., concurring) (discussing economic effect of usury rules); Maryland Casualty Co. v. City of Jackson, 493 So. 2d 955, 960 n.3 (Miss. 1986) (discussing Hand formula for negligence). *See generally* 50 Law & Contemp. Probs. (1987) (containing series of articles discussing influence of economics on the courts).

ics is a field of study that is often misunderstood. Even among lawyers, many are unfamiliar with its basic principles. In general terms, law and economics involves the application of economic concepts and economic methods, such as cost-benefit analysis, to the resolution of legal disputes.

In most traditional areas of the law, there are several good textbooks that serve as introductions to the field.[3] The available textbooks for law and economics courses, however, are few in number and limited in scope. There is no definitive or dominant casebook. Robin Paul Malloy, who is professor of law and economics at Syracuse University College of Law, has recently published a new book that contributes to the limited offerings in the law and economics field.[4] This book review provides a brief survey of the introductory literature in law and economics and then reviews Malloy's new work. The review also offers suggestions for a complete introductory text for law and economics.

I. Law and Economics Texts: An Overview

The history of the modern[5] law and economics movement has no precise starting point. The intellectual leader of the law and economics movement is, of course, Richard Posner, a former law professor at the University of Chicago and now a federal appellate judge on the United States Court of Appeals for the Seventh Circuit. Posner himself traces law and economics scholarship to its roots in the work of Adam Smith and Jeremy Bentham.[6] Still, outside of the traditional areas in which economics has always had a substantial influence (such as antitrust law), the economic analysis of law began its modern emergence around 1960. Within a three-year period, Gary Becker published

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[3] For antitrust law, for example, most teachers and practitioners would name P. Areeda & L. Kaplow, Antitrust Analysis (4th ed. 1988). The classic introduction to property law is J. Dukeminier & J. Krier, Property (2d ed. 1988).

[4] R. Malloy, Law and Economics: A Comparative Approach To Theory and Practice (1990).

[5] The word "modern" is necessary, because economists and lawyers have combined their efforts in an organized fashion at least once before, as Professor Herbert Hovenkamp has observed in an informative recent article. *See* Hovenkamp, *The First Great Law & Economics Movement*, 42 Stan. L. Rev. 993 (1990).

[6] *See* Posner, *Some Uses and Abuses of Economics in Law*, 46 U. Chi. L. Rev. 281, 281-82 (1979).

his ground-breaking economic analysis of race discrimination,[7] Guido Calabresi produced his article on the role of risk distribution in tort law,[8] and Ronald Coase wrote his seminal article on the role of property and liability rules in the efficient allocation of resources.[9]

After a period of relative inactivity in the 1960s, the next major landmark in law and economics was the publication of Posner's book, *Economic Analysis of Law*,[10] in 1972. Posner's work soon became the primer for those interested in learning about economic approaches to law. The book is now in its third edition, which is a substantial improvement and expansion on the earlier versions.[11] The third edition of Posner's book has much to commend it. It is still by far the most comprehensive text available in the field, covering everything from abortion to zoning.[12] For a relatively brief discussion of the economic approach to a particular area of the law, Posner's book is second to none. Thus, for a student, scholar, practitioner, or judge interested in occasionally citing or using a Posnerian economic argument, Posner's book is a valuable addition to the reference bookshelf.

As an introduction to law and economics, however, the book has several flaws. First, it is a *treatise* on the economic analysis of law. It therefore consists entirely of textual discussion of the economic approach to various areas of law. There are no case excerpts in the book. There are very few quotations from other authors in the law and economics field. And the questions at the end of each chapter tend to be brief and unsatisfying, often leav-

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[7] A. Becker, The Economics of Discrimination (1959).

[8] Calabresi, *Some Thoughts on Risk Distribution and the Law of Torts*, 70 Yale L.J. 499 (1961).

[9] Coase, *The Problem of Social Cost*, 3 J.L. & Econ. 1 (1960).

[10] R. Posner, Economic Analysis of Law (1st ed. 1972).

[11] R. Posner, Economic Analysis of Law (3d ed. 1986). The second edition contains extensive revisions, particularly in the discussions of tort damages, legal rulemaking, contracts, family law, and corporate finance. R. Posner, Economic Analysis of Law xvii (2d ed. 1977). The third edition, among other things, includes a new chapter on the fourth amendment and an expanded section on corporate law. R. Posner, *supra*, at 365-428, 639-42 (3d ed.). All subsequent citations to Posner's book will refer to the third edition.

[12] *See* R. Posner, *supra* note 11, at 130, 141 n.6 (discussing abortion); *id.* at 53, 60-61, 77 (discussing zoning).

ing the uninitiated reader baffled about what Posner is getting at. In using Posner's book to teach my law and economics course, I have tried to resolve the problem by compiling a supplement that consists mainly of various federal and state court decisions. Many teachers follow this approach, each of them having a different smorgasbord of cases and commentaries which they present to their students as leavening for Posner's text. Other professors address this problem by assigning a supplementary text to their students.

A second major problem with Posner's book is the author's single-minded approach to the course material. Although Posner is the leader of the law and economics movement, he is not everyone's cup of tea. His vision of the law focuses on the economic man to the apparent exclusion of all else. His discussion of rape, for instance, should strike many as being frighteningly devoid of any recognition of the moral and ethical aspects of the crime. Posner notes that rape can be viewed as a coercive, involuntary transfer of wealth from the victim to the rapist, much like embezzlement or counterfeiting.[13] Clearly this approach to the issue of rape fails to grasp the gravity of the offense. He proceeds: "Suppose the rapist derives extra pleasure from the coercive character of his act. Then there would be no market substitute for rape and *it could be argued that rape is not a pure coercive transfer and should not be punished criminally*.[14]" In other words, perhaps forcible rape should not be punished, because the rapist cannot get that form of satisfaction in the marketplace, while crimes such as embezzlement would continue to be penalized (given the availability of market alternatives).

Posner concedes that this argument is "weak."[15] His reasons for rejecting the argument for legalizing rape include the need "to protect the marriage market . . . and more generally to secure property rights in women's persons," the desire to avoid inefficient expenditures on security measures to protect women

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[13] R. POSNER, *supra* note 11, at 201-02. The rape would be a coercive transfer because the rapist presumably obtains pleasure from the rape at the expense of the victim, who has not consented and who is not compensated for the criminal's action. *Id.*

[14] *Id.* at 202 (emphasis added).

[15] *Id.*

from rape, and the uncertainty over whether the rapist values his coercive act more or less than the victim disvalues it.[16] Posner never even mentions the moral consensus that society has reached concerning rape as a crime of violence and sexual domination.[17] Even readers who are generally sympathetic to law and economics would be troubled by Posner's narrow perspective in analyzing rape. This narrow perspective is also evident, for example, in his analysis of baby-selling.[18] Most teachers who use Posner's book qualify his assertions and note differing viewpoints, and some professors find themselves generally "teaching against" the book.

A final objection that some readers may have to Posner's book is that it is sometimes difficult to read, particularly for those who are unfamiliar with the language and approaches of law and economics. Although the book is actually more readable than the work of many other legal scholars (and certainly most economists), this criticism may be a legitimate one for some who are approaching law and economics for the first time. Posner's book is not easy reading. It requires concentration to follow the flow of his argument, and few readers can absorb large portions of the book in one sitting. Posner's book is probably best read chapter-by-chapter so that one can follow his reasoning without suffering from mental exhaustion.

In 1984, Charles J. Goetz, a professor at the University of

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[16] *Id.*

[17] *See generally* S. ESTRICH, REAL RAPE: HOW THE LEGAL SYSTEM VICTIMIZES WOMEN WHO SAY NO 82-83 (1987) (discussing impact of societal perceptions of rape on reporting and prosecution of rape cases); Estrich, *Rape*, 95 YALE L.J. 1087, 1105 (1986) (same).

[18] *See* R. POSNER, *supra* note 11, at 137-44. For a thorough discussion of the subject, see Landes & Posner, *The Economics of the Baby Shortage*, 7 J. LEGAL STUD. 323 (1978), Posner, *The Regulation of the Market in Adoptions*, 67 B.U.L. REV. 59 (1987), and Radin, *Market Inalienability*, 100 HARV. L. REV. 1849, 1849 (1987).

For a criticism of Posner's views on slavery and other moral issues, see Malloy, *Is Law and Economics Moral?—Humanistic Economics and a Classical Liberal Critique of Posner's Economic Analysis*, 24 VAL. U.L. REV. 147 (1990). Posner's response as to slavery is that an absolutist view of slavery ignores history and reality. He points out that, in ancient civilizations, slavery was an improvement over the prior practice, which was to massacre all able-bodied males in a conquered territory. He also notes that the absolute condemnation of slavery depends on how enslavement is defined, given that military service and prison labor farms can be viewed as forms of involuntary servitude that society accepts. Posner, *Law and Economics is Moral*, 24 VAL. U.L. REV. 163, 172 (1990).

Virginia School of Law, published his casebook on law and economics.[19] Because it is a casebook, the Goetz text does not suffer from some of the problems one encounters when reading or using Posner's treatise. For instance, Goetz's book contains numerous case excerpts and illustrations, which provide facts for class discussion and for a practical understanding of law and economics. Several sections of Goetz's book are particularly strong, such as his chapter on present value and interest rates. Goetz offers the reader more than a half dozen case excerpts, which illustrate the application of present value concepts to such legal issues as prejudgment interest and lost future earnings.[20] His chapter on the use of economists as expert witnesses[21] is also useful and, at least thus far, unique among law and economics textbooks. The present value and expert witness discussions are especially important to demonstrate that law and economics is not a purely theoretical approach. By using material on these two topics, it is possible to illustrate that economics really can contribute to law in a practical and relatively objective manner. A lawyer who expects to practice in the personal injury area or in commercial matters cannot afford to ignore the time value of money. The civil rights or corporate litigator today needs an understanding of the kinds of expert testimony economists and other social scientists can offer. The modern lawyer needs to know how statistical and other economic evidence can bolster a case, how this type of evidence can be overstated or misused, and how to refute or rebut an opponent's use of expert testimony.[22]

Despite its good points, the Goetz book has not received widespread use or acceptance. The book is not conveniently organized; chapters are organized by economic concepts, not by areas of law. For a lawyer or law student using the book, Goetz's organization makes it difficult to use and understand the mate-

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[19] C. GOETZ, LAW AND ECONOMICS: CASES AND MATERIALS (1984).

[20] *Id.* at 157-229.

[21] *Id.* at 463-504.

[22] *E.g.*, M. FINKELSTEIN & B. LEVIN, STATISTICS FOR LAWYERS (1990); THE EVOLVING ROLE OF STATISTICAL ASSESSMENTS AS EVIDENCE IN THE COURTS (S. Feinberg ed. 1989); *see, e.g.*, McClesky v. Kemp, 481 U.S. 279 (1987) (addressing use and implications of statistical evidence purporting to show that death penalty was administered in racially biased manner in state of Georgia).

rial. The book is also heavily laden with economic jargon, which does not make it accessible to readers unfamiliar with economics.[23] Finally, on a largely subjective note, Goetz's book is not as interesting as a casebook in this field should be. Law and economics is a fascinating subject, with potentially wide application to many areas of the law. Although it is unnecessary to dwell on hot topics such as baby selling for too many hours, Goetz fails to tap the full potential of his subject in this regard.

In 1988, two law and economics texts were published. Werner Z. Hirsch, a professor of economics at the University of California at Los Angeles, published the second edition of his introductory text.[24] Meanwhile, Robert Cooter of Berkeley and Thomas Ulen of the University of Illinois, Urbana, wrote a new law and economics text.[25] These two books are similar in both their advantages and their disadvantages. Both books creditably cover the principal areas of law in which economic analysis has been applied: contracts, torts, property, and criminal law.[26] Either one could be used as a primary text for a law and economics course. Both books also contain well written text.

The most serious disadvantage of these books is that they are not geared toward readers who are already familiar with general principles of law. For example, Hirsch's treatment of tort law covers eighty-five pages but more than half of that material consists of explanations of various tort concepts and rules.[27] Although the treatment of basic tort law in the Cooter and Ulen book is briefer than in Hirsch's text, their book still spends a substantial amount of time explaining basic legal concepts before proceeding to discuss the economic analysis of those

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[23] For example, chapter headings include "Intertemporal Adjustments of Costs and Benefits," "Mappings and 'Demand' Decisions," and "Supply and Systemic Interactions." C. GOETZ, *supra* note 19, at 157, 230, 375. Although these terms are elementary to any economist, they intimidate beginning readers. They are also unnecessary, as there are ways of describing the material in nontechnical terms.

[24] W. HIRSCH, LAW AND ECONOMICS: AN INTRODUCTORY ANALYSIS (2d ed. 1988).

[25] R. COOTER & T. ULEN, LAW AND ECONOMICS (1988).

[26] Hirsch also covers environmental law, antitrust, and discrimination law. W. HIRSCH, *supra* note 24, at 283-400. Cooter and Ulen cover the efficiency of the litigation process. R. COOTER & T. ULEN, *supra* note 25, at 477-505.

[27] W. HIRSCH, *supra* note 24, at 165-250.

concepts.[28]

The Cooter and Ulen text contains a good introduction to the basic principles of economics, although their approach may rely too heavily on graphs for readers who are unfamiliar with economics and graphical analysis. Hirsch, on the other hand, begins with an overview of the interaction between law and economics.[29] He then weaves economic principles into his discussion of the law. The absence of a brief primer on economics is an unfortunate omission in the Hirsch text. Finally, the Cooter and Ulen text includes a substantial number of case excerpts and problems, which make that volume a more useful teaching tool than Hirsch's book. The latter resembles Posner's book in that it lacks case excerpts, although Hirsch does include extensive discussions of several important problems, such as rent control, the warranty of habitability, and statistical evidence of the deterrent effect of criminal penalties.[30]

In 1989, A. Mitchell Polinsky, professor of law and economics at Stanford University, produced the second edition of his law and economics text.[31] Many first-time readers would probably find Polinsky's book to be the most accessible brief introduction to law and economics. His book is well written and explains major concepts through the use of extensive hypotheticals. The hypotheticals are fairly concrete and generally include specific numerical examples, which most readers should find illuminating. Polinsky does not try to do everything in his relatively short book, but the material he does cover is handled very effectively. In particular, Polinsky's book contains an excellent discussion of the Coase theorem, the concepts of risk and insurance, and the distinction between equity and efficiency concerns in economic analysis.

The main limitation of Polinsky's book stems from its brevity and lack of comprehensive coverage. A law and economics teacher or anyone else interested in a complete treatment of the field would have to supplement Polinsky's book with a consider-

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[28] R. COOTER & T. ULEN, *supra* note 25, at 326-476.

[29] W. HIRSCH, *supra* note 24, at 1-22.

[30] *Id.* at 64-87, 268-82.

[31] A. POLINSKY, AN INTRODUCTION TO LAW AND ECONOMICS (2d ed. 1989).

able number of outside readings. Most of Polinsky's book applies economic concepts to tort and contract situations, leaving large areas of the law with limited coverage, if any. Similarly, there are many economic concepts relevant to law that are not covered in Polinsky's book, such as the concept of the free rider, indifference curves, the effect of legal rules on market equilibria, and statistical analysis.

II. Malloy's Text on Law and Economics

Given this relatively uncrowded field of introductory literature, Malloy has written a book that may fill several niches. Malloy's text does not pretend to offer a comprehensive introduction to law and economics. It is a short book, organized in three main parts. The first part is an introduction to the basic concepts of law and economics such as opportunity cost, the supply and demand model, the Coase theorem, and various definitions of efficiency.[32] This section is a useful introduction to these crucial economic tools, although Malloy's treatment of the Coase theorem is too cursory and fails to explain the ramifications of the theorem.[33]

The second part of Malloy's book differentiates his product from the other introductory law and economics texts. As his title indicates, Malloy takes a comparative approach to law and economics. The second part gives an overview of various approaches to "law and economics" or at least to public policy questions generally. Malloy tells us, quite legitimately, that the field of law and economics is not monolithic.[34] Everyone who identifies with the law and economics approach is not necessarily a clone of Judge Richard Posner. Nor are they necessarily adherents of the neoclassical or Chicago schools of economic thought. Those who take a liberal or Marxist or libertarian approach offer different perspectives on the normative questions encountered in law and

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[32] R. Malloy, *supra* note 4, at 14-47.

[33] *Cf.* R. Malloy, *supra* note 4, at 34-38 *with* R. Cooter & T. Ulen, *supra* note 25, at 99-108 (describing ramifications of Coase theorem); A. Polinsky, *supra* note 31, at 11-52 (describing Coase theorem and applying it to nuisance law, breach of contract, and automobile accident situations).

[34] R. Malloy, *supra* note 4, at 10.

economics. For Malloy, a comparison of these differing viewpoints is the most productive way to understand law and economics. Thus, he devotes more than one-fourth of his book to a general description of the contrasting approaches.

Whether Malloy's comparative method is the most useful way to appreciate law and economics is open to question. If law and economics can really be reduced to a list of different economic philosophies, each with its own set of ideological baggage, then it is not a particularly useful way of think about legal problems. Fortunately, law and economics is not so easily dismissed. Malloy himself acknowledges the existence of what he calls the "economic analysis of law."[35] Economic analysis of law involves the use of positive economic methods to evaluate various legal questions. Most mainstream economists, regardless of their political persuasion, accept and use the standard economic models and methodologies. They perform positive economic analysis—make assumptions, develop a hypothesis, test the hypothesis using available data, and determine if the data tend to support or refute the stated hypothesis. If repeated testing leads to results consistent with the original hypothesis, then the economist will accept the hypothesis as valid. The hypothesis or theory is valid and useful because it predicts the effect of a policy or action on the marketplace.[36]

Economists and others can then draw normative conclusions from the research; in this part of the process, political and philosophical differences may emerge. Nonetheless, the real contribution of positive economics is that it clarifies and defines what is at stake and then allows each of us to draw our own normative conclusion about what is best for society. A common theme running through other law and economics texts is that positive economics *can* provide useful insights into questions of legal policy.[37] This point can best be illustrated by an example. Suppose the policymakers want to provide low-income persons with decent, affordable housing. An economist can study the effective-

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[35] R. MALLOY, *supra* note 4, at 3.

[36] *See generally* M. FRIEDMAN, *The Methodology of Positive Economics*, in ESSAYS IN POSITIVE ECONOMICS 7-23 (1953).

[37] R. COOTER & T. ULEN, *supra* note 25, at 8-13; W. HIRSCH, *supra* note 25, at 8-9; R. POSNER, *supra* note 11, at 20-22.

ness of various methods of providing the housing. He or she could study the costs per unit for building publicly owned housing units, for subsidizing privately owned housing for the poor, and for providing direct payments or vouchers to the poor, allowing them to purchase housing in the regular rental market. The economist could then take into account the differing levels of housing quality, any economies of scale, and other factors that might affect the outcome. At the end of this process, the economist may be able to offer predictions about the overall costs and benefits of each type of housing program—a positive or descriptive exercise.[38] The policymakers can then draw their own conclusions concerning which program to adopt.

This productive interplay between positive economics and normative decisionmaking can be repeated for a wide array of legal questions. What is the most efficient remedy for breaches of contract?[39] What is the effect of strict liability rules on the amount of precautions taken by manufacturers?[40] Do fee-shifting statutes increase or decrease the overall amount of litigation or the amount of baseless litigation?[41] Does the death penalty

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[38] W. HIRSCH, *supra* note 24, at 93-95; R. POSNER, *supra* note 11, at 441-51.

[39] *See, e.g.*, Barton, *The Economic Basis of Damages for Breach of Contract*, 1 J. LEGAL STUD. 277, 293-300 (1972) (using empirical allocation of risk as basis for determining damages for breach of contract); Cooter & Eisenberg, *Damages for Breach of Contract*, 73 CAL. L. REV. 1432, 1435-77 (1985) (discussing various measures of damages in terms of economic theory and formulae); Goetz & Scott, *Liquidated Damages, Penalties, and the Just Compensation Principle: Some Notes on an Enforcement Model and a Theory of Efficient Breach*, 77 COLUM. L. REV. 554, 558-94 (1977) (favoring "enforcement rule" over "penalty rule" on grounds of cost-benefit analysis); Shavell, *Damage Measures for Breach of Contract*, 11 BELL J. ECON. 466, 466-90 (1980) (comparing economic efficiency of reliance and expectation damages).

[40] *See, e.g.*, Calabresi & Hirschoff, *Toward a Test for Strict Liability in Torts*, 81 YALE L.J. 1055, 1060-66 (1972) (demonstrating through cost-benefit analysis that strict liability rules have only incidental effects on precautions taken by product manufacturers); Chelius, *Liability for Industrial Accidents: A Comparison of Negligence and Strict Liability Systems*, 5 J. LEGAL STUD. 293, 298-306 (1976) (in workers' compensation field, strict liability reduces workers' level of risk by placing greater safety demands on manufacturer); Shavell, *Strict Liability Versus Negligence*, 9 J. LEGAL STUD. 1, 12-22 (1980) (strict liability inefficient in providing manufacturer incentives to reduce accident losses).

[41] *See, e.g.*, Braeutigam, Owen & Panzar, *An Economic Analysis of Alternative Fee Shifting Systems*, 47 LAW & CONTEMP. PROBS. 173, 175-82 (1984) (American system of fee-shifting quite possibly reduces litigation); Rowe, *Predicting the Effects of Attorney Fee Shifting*, 47 LAW & CONTEMP. PROBS. Winter 1984, at 138, 170-71 (noting that social

deter crime?[42] How much does it cost to administer the death penalty versus a system of life imprisonment?[43] Does criminalization reduce the amount of drug abuse?[44]

Furthermore, the results of positive economic analysis do not by any means automatically support the political agenda of any particular group, such as conservative Republicans. Although economic analysis may tell us that the minimum wage[45] or rent control[46] produces inefficient and undesired results, it

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and moral goals in litigation obscure effect of fee shifting on quantity of litigation); Schmalbeck & Myers, *A Policy Analysis of Fee-Shifting Rules Under the Internal Revenue Code*, 1986 DUKE L.J. 970, 1000-02 (Internal Revenue Code deters parties from acting unreasonably and at same time does not deter parties with valid claims from engaging in litigation); Shavell, *Suit, Settlement, and Trial: A Theoretical Analysis Under Alternative Methods for the Allocation of Legal Costs*, 11 J. LEGAL STUD. 55, 58 (1982) (assessing effect of legal costs on level and frequency of litigation).

[42] *See, e.g.*, Ehrlich, *The Deterrent Effect of Capital Punishment: A Question of Life and Death*, 65 AM. ECON. REV. 397, 397 (1975) (applications of economic theory support idea that offenders respond to incentives and that punishment deters commission of specific crimes); *see also* Ehrlich & Gibbons, *On the Measurement of the Deterrent Effect of the Capital Punishment and the Theory of Deterrence*, 6 J. LEGAL STUD. 35, 35 (1977) (econometric analysis implies that increase in number of executions would lead to decrease in number of murders); Ehrlich, *Capital Punishment and Deterrence: Some Further Thoughts and Evidence*, 85 J. POL. ECON. 741, 743 (1977) (same). *But see* Baldus & Cole, *A Comparison of the Work of Thorsten Sellin and Isaac Ehrlich on the Deterrent Effect of Capital Punishment*, 85 YALE L.J. 171, 173 (questioning reliability of statistical evidence as tool in judging deterrent effect of death penalty); Bowers & Pierce, *The Illusion of Deterrence in Isaac Ehrlich's Research on Capital Punishment*, 85 YALE L.J. 187, 187 (1975) (depicting Ehrlich's analysis as misleading).

[43] *See generally* Nakell, *The Cost of the Death Penalty*, 14 CRIM. L. BULL. 69, 69 (1978) (life imprisonment less costly than execution); Comment, *The Cost of Taking Life: Dallass and Sense of the Death Penalty*, 18 U.C. DAVIS L. REV. 1221, 1221 (1985) (same).

[44] *See, e.g.*, Deininger, *The Economics of Heroin: Key to Optimizing the Legal Response*, 10 GA. L. REV. 565, 565 (1976) (criminalization does not decrease heroin use); Votey, *Detention of Heroin Addicts, Job Opportunities and Deterrence*, 8 J. LEGAL STUD. 585 (1979).

[45] *See, e.g.*, THE ECONOMICS OF THE MINIMUM WAGE (S. Rottenberg ed. 1981); D. PARSONS, POVERTY AND THE MINIMUM WAGE (1980); Behrman, Sickles & Taubman, *The Impact of Minimum Wages on the Distribution of Earnings for Major Race-Sex Groups: A Dynamic Analysis*, 73 AM. ECON. REV. 766, 776 (1983) (minimum wage impact on earnings of working poor "mixed"); Brown, Gilroy & Kohen, *The Effect of the Minimum Wage on Employment and the Demand for Labor*, 20 ECON. INQUIRY 365 (1982); Linneman, *The Economic Impacts of Minimum Wage Laws: A New Look at an Old Question*, 90 J. POL. ECON. 443 (1982).

[46] *See, e.g.*, W. HIRSCH, *supra* note 24, at 82-87 (in long run, rent control likely to curtail supply of housing by chilling investment); Cheung, *Rent Control and Housing*

may also tell us that the death penalty costs more than a system of life imprisonment[47] or that criminalization of use and sale of drugs does not substantially reduce drug consumption by addicts (and *does* increase the number of crimes committed by addicts).[48] Positive economic theory and economic models have been used to justify the antitrust law proscription against monopoly,[49] the award of extensive damages for wrongful death,[50] and the involvement of the government to assure the efficient level of production of various public goods.[51]

For Malloy, these lines of inquiry are "too narrow . . . for today's lawyers."[52] Rather, a lawyer must "be able to recharacterize the underlying philosophical justifications for her legal arguments depending upon whether her audience is more or less sympathetic to anyone [sic] of a competing number of legal schools of thought."[53] Although it is true that a lawyer must be aware of the role of ideology in law, law and economics offers the lawyer a number of tools that can be used regardless of the audience's ideological leanings.

In the last major section of Malloy's book, he has gathered excerpts from five leading cases, which illustrate the practical

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Reconstruction: The Postwar Experience in Hong Kong, 22 J. LAW & ECON. 27, 28-29 (1979) (Hong Kong rent control ordinance severely complicated achievement of urban renewal); Olsen, *An Econometric Analysis of Rent Control*, 80 J. POL. ECON. 1081, 1091-96 (1972) (finding that cost of producing housing unit in rent-controlled market would be higher than cost of producing unit in uncontrolled market).

[47] *See supra* note 43.

[48] *See supra* note 44.

[49] Posner, *The Social Costs of Monopoly and Regulation*, 83 J. POL. ECON. 807, 822-23 (1975).

[50] *See* McGowan v. Estate of Wright, 524 So. 2d 308, 311-13 (1988) (Robertson, J., dissenting) (recovery in wrongful death action should include non-pecuniary utility of decedent's life expectancy); Note, *An Economic Analysis of Tort Damages for Wrongful Death*, 60 N.Y.U.L. REV. 1113, 1115 (1985) (authored by Jennifer H. Arlen) (finding current damage rules to be neither Pareto nor Kaldor-Hicks efficient and suggesting approach to designing optimal tort damage rules).

[51] Public goods are goods that are underproduced in a free market because they can be consumed by others without being exhausted and because people cannot be prevented from consuming the goods. Examples of public goods include national defense, police protection, information, and charitable contributions. R. COOTER & T. ULEN, *supra* note 26, at 46-48, 108-16; *see also* POSNER, *supra* note 11, at 438-41 (discussing costs of poverty and limitations of private charity).

[52] R. MALLOY, *supra* note 4, at 4.

[53] *Id.*

applications for the theories developed earlier in his book. Malloy's five cases appear to be carefully selected. The first two cases are *Williams v. Walker-Thomas Furniture Co.*,[54] which concerned the doctrine of unconscionability of certain consumer credit contracts, and *Javins v. First National Realty Corp.*,[55] which established the implied warranty of habitability for rental housing. These classic consumer-oriented decisions are particularly appropriate subjects for economic analysis. Malloy's approach to these decisions is fairly traditional. First, he reviews possible economic assumptions or justifications underlying these cases. Both *Williams* and *Javins* implicitly assume either that the relevant market is not operating in a competitive manner or that a competitive market is not serving the best interests of lower-income persons. Malloy should have considered expanding on his discussion of possible "market failure" justifications for these two cases. For example, both cases might be justified on grounds that sellers and landlords have market power that allow them to impose burdensome terms on lower-income consumers—assuming there is evidence of this market power.[56] Malloy also notes the predictions that economists have made concerning the unintended effects of *Williams* and *Javins* on the consumer credit and rental housing markets.[57] In essence, their prediction is that sellers will try to pass along the cost of complying with these decisions to consumers, typically by raising prices. Consumers may be worse off, either because they are paying for something they did not want or because they can no longer afford to buy the product. If sellers are unable to pass along most of their costs, they may leave the market either by refusing to extend credit to lower-income persons or by abandoning marginal rental housing units. These predictions are precisely the types of input that economists can provide to policymakers.

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[54] 350 F.2d 445 (D.C. Cir. 1965).

[55] 428 F.2d 1071 (D.C. Cir. 1970).

[56] Evidence of market power would include profit levels that are unusually high given the level of risk in the market, combined with the presence of a long-term shortage or a small number of sellers. The decisions may also be justified on the ground that consumers and tenants lack full information and that they would have struck a different bargain if they were fully informed.

[57] R. MALLOY, *supra* note 4, at 109-10, 120-21.

Thus, although Malloy downplays the importance of positive economics, he does not ignore it completely.

Finally, Malloy's book contains excerpts from three additional cases: a decision concerning a prisoner's right to appointed counsel in civil litigation,[58] a "comparable worth" case,[59] and a tort case involving a damage recovery for the faulty design of the Ford Pinto.[60] Each of these decisions illustrates Malloy's basic thesis concerning the role that ideology and economic assumptions play in deciding cases. They also demonstrate areas in which positive economics can offer some insights, particularly in the areas of comparable worth and tort liability for defectively designed products. Lastly, all three cases are good vehicles for generating discussion and debate on some of the fundamental issues concerning the value and limits of law and economics.

III. A Complete Introduction to Law and Economics

Each of the available law and economics texts, including Malloy's new work, has some of the features that might be found in a complete introduction to law and economics. No currently published text, however, combines all the important features in one volume.[61] One version of a complete introduction to law and economics might contain the following elements.

First, given that many law-oriented readers will be unfamiliar with basic economic concepts, it is essential to include an introductory discussion of efficiency, supply and demand, and other fundamental principles. The introduction might also address some of the frequently made criticisms of economics, explaining why economists make assumptions and how they deal with questions of equity or fairness.

Second, the book should explain in general what law and economics is. Economics can make numerous contributions to the law. It can play a descriptive, normative, or positive role.

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[58] Merritt v. Faulkner, 697 F.2d 761, 762-69 (7th Cir. 1983).

[59] American Nurses Ass'n v. Illinois, 783 F.2d 716, 718-23 (7th Cir. 1986).

[60] Grimshaw v. Ford Motor Co., 119 Cal. App. 3d 757, 174 Cal. Rptr. 348, 369-99 (Cal. Ct. App. 1981).

[61] David W. Barnes and Lynn A. Stout are writing a new text on law and economics which will be published in the next year.

These differing contributions should be explained and distinguished. It might also be useful to acknowledge the *limits* of economics, a topic that often receives little attention in the law and economics literature. These limits include practical problems, such as insufficient data, indeterminate statistical evidence, and values that cannot be readily quantified. Other limits occur because normative efficiency goals may conflict with other concerns, such as justice, equity, or retribution.[62]

Next, the book might discuss the application of economics in various substantive areas of the law. The book should cover the traditional common law fields of property, contracts, torts, and criminal law. Most of the law and economics literature has focused on these subjects. In discussing each area of the law, the book might focus on normative justifications for legal rules and on positive economic evidence concerning the actual effect of particular laws. These discussions should include a substantial number of case excerpts and problems, which can serve as foundations for classroom discussion. In the process of discussing the legal doctrines, the book can introduce new economic concepts and apply the economic principles set forth in the introduction. For example, the discussion of property rights might refer back to the notion of allocative efficiency; i.e., transferable property rights allow resources to be moved toward their highest-valued use. The discussion could also introduce the "tragedy of the commons," noting the overuse and misuse of property that often occurs when it is commonly or jointly owned.[63]

Further, the book might cover other substantive areas of law, depending on the author's inclinations and the book's intended uses. Corporate law and employment discrimination, for example, are two areas in which law and economics has made fruitful contributions.

Finally, a complete law and economics text would offer a discussion of some of the practical uses for economics in law. In particular, economic evidence can be valuable in calculating

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[62] For one judge's view of the limits of law and economics, see Wald, *Limits on the Use of Economic Analysis in Judicial Decisionmaking*, 50 LAW & CONTEMP. PROBS. 225 (1987).

[63] *See, e.g.*, R. COOTER & T. ULEN, *supra* note 25, at 186-88.

damages and for other valuation problems. Moreover, statistical evidence plays an important role in cases concerning civil rights, employment discrimination, the death penalty, and business disputes. A discussion of these uses could either be interspersed with the other parts of the text or could stand alone as a separate chapter of the book.

IV. Conclusion

Robin Paul Malloy's new law and economics text is a good addition to the law and economics literature, particularly given its use of case excerpts to illustrate the application of economics to law. Because it takes a comparative approach to law and economics, focusing on the role of ideology, Malloy's book may be a good counterpoint to Posner's law and economics treatise.

Standing on its own, however, Malloy's book is not a complete introduction to law and economics because it fails to give sufficient attention to the role of positive economic analysis. The use of economic models and other techniques of economics to describe the world as it is and to predict the effects of policy decisions is one of the fundamental contributions of economics to legal decisionmaking. By giving short shrift to positive economics, Malloy leaves the reader thinking that law and economics is solely a jurisprudential exercise and that the economist is nearly useless if one does not share his or her political ideology. In many respects, Malloy has ignored the most practical aspect of law and economics, an unfortunate omission in any introduction to this fruitful field.

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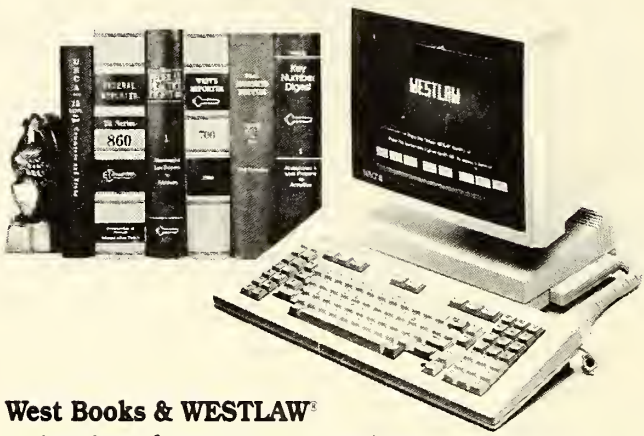

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